OMB Number: 2030-0020
Expiration Date: 06/30/2024

Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance

Note: Read Instructions before completing form.

I. A. Applicant/Recipient (Name, Address, City, State, Zip Code)

Name: Capital Area Council of Governments

Address: 6800 Burleson Road, Building 310, Suite 165

City: Austin

State: TX: Texas Zip Code: 78744-2325

B. DUNS No. 091784053

II. Is the applicant currently receiving EPA Assistance? ☐ Yes ☒ No

III. List all civil rights lawsuits and administrative complaints pending against the applicant/recipient that allege discrimination based on race, color, national origin, sex, age, or disability. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

None

IV. List all civil rights lawsuits and administrative complaints decided against the applicant/recipient within the last year that allege discrimination based on race, color, national origin, sex, age, or disability and enclose a copy of all decisions. Please describe all corrective actions taken. (Do not include employment complaints not covered by 40 C.F.R. Parts 5 and 7.)

None

V. List all civil rights compliance reviews of the applicant/recipient conducted by any agency within the last two years and enclose a copy of the review and any decisions, orders, or agreements based on the review. Please describe any corrective action taken. (40 C.F.R. § 7.80(c)(3))

None

VI. Is the applicant requesting EPA assistance for new construction? If no, proceed to VII; if yes, answer (a) and/or (b) below.

☐ Yes ☒ No

a. If the grant is for new construction, will all new facilities or alterations to existing facilities be designed and constructed to be readily accessible to and usable by persons with disabilities? If yes, proceed to VII; if no, proceed to VI(b).

☐ Yes ☐ No

b. If the grant is for new construction and the new facilities or alterations to existing facilities will not be readily accessible to and usable by persons with disabilities, explain how a regulatory exception (40 C.F.R. 7.70) applies.

VII. Does the applicant/recipient provide initial and continuing notice that it does not discriminate on the basis of race, color, national origin, sex, age, or disability in its program or activities? (40 C.F.R 5.140 and 7.95)	☒ Yes	☐ No
a. Do the methods of notice accommodate those with impaired vision or hearing?	☒ Yes	☐ No
b. Is the notice posted in a prominent place in the applicant's offices or facilities or, for education programs and activities, in appropriate periodicals and other written communications?	☒ Yes	☐ No
c. Does the notice identify a designated civil rights coordinator?	☒ Yes	☐ No
VIII. Does the applicant/recipient maintain demographic data on the race, color, national origin, sex, age, or handicap of the population it serves? (40 C.F.R. 7.85(a))	☒ Yes	☐ No
IX. Does the applicant/recipient have a policy/procedure for providing access to services for persons with limited English proficiency? (40 C.F.R. Part 7, E.O. 13166)	☒ Yes	☐ No

X. If the applicant is an education program or activity, or has 15 or more employees, has it designated an employee to coordinate its compliance with 40 C.F.R. Parts 5 and 7? Provide the name, title, position, mailing address, e-mail address, fax number, and telephone number of the designated coordinator.

Yes - Anwar Sophy - Deputy Executive Director - 6800 Burleson Road, Building 310, Suite 165, Austin, Texas, 78744 - asophy@capcog.org - Phone: (512) 916-6009, Fax: (512) 916-6001

XI. If the applicant is an education program or activity, or has 15 or more employees, has it adopted grievance procedures that assure the prompt and fair resolution of complaints that allege a violation of 40 C.F.R. Parts 5 and 7? Provide a legal citation or Internet Address for, or a copy of, the procedures.

Yes - CAPCOG Civil Rights Act/Non-Discrimination Notice internet address for complaint procedure, https://www.capcog.org/transparency/non-discrimination-notice/

For the Applicant/Recipient

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law. I assure that I will fully comply with all applicable civil rights statutes and EPA regulations.

A. Signature of Authorized Official	B. Title of Authorized Official	C. Date
Sheila Jennings	Executive Director	03/25/2022

For the U.S. Environmental Protection Agency

I have reviewed the information provided by the applicant/recipient and hereby certify that the applicant/recipient has submitted all preaward compliance information required by 40 C.F.R. Parts 5 and 7; that based on the information submitted, this application satisfies the preaward provisions of 40 C.F.R. Parts 5 and 7; and that the applicant has given assurance that it will fully comply with all applicable civil rights statures and EPA regulations.

A. *Signature of Authorized EPA Official	B. Title of Authorized Official	C. Date

*** See Instructions**

Instructions for EPA FORM 4700-4 (Rev. 06/2014)

General. Recipients of Federal financial assistance from the U.S. Environmental Protection Agency must comply with the following statutes and regulations.
Title VI of the Civil Rights Acts of 1964 provides that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. The Act goes on to explain that the statute shall not be construed to authorize action with respect to any employment practice of any employer, employment agency, or labor organization (except where the primary objective of the Federal financial assistance is to provide employment). Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act provides that no person in the United States shall on the ground of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under the Federal Water Pollution Control Act, as amended. Employment discrimination on the basis of sex is prohibited in all such programs or activities. Section 504 of the Rehabilitation Act of 1973 provides that no otherwise qualified individual with a disability in the United States shall solely by reason of disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Employment discrimination on the basis of disability is prohibited in all such programs or activities. The Age Discrimination Act of 1975 provides that no person on the basis of age shall be excluded from participation under any program or activity receiving Federal financial assistance. Employment discrimination is not covered. Age discrimination in employment is prohibited by the Age Discrimination in Employment Act administered by the Equal Employment Opportunity Commission. Title IX of the Education Amendments of 1972 provides that no person in the United States on the basis of sex shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance. Employment discrimination on the basis of sex is prohibited in all such education programs or activities. Note: an education program or activity is not limited to only those conducted by a formal institution. 40 C.F.R. Part 5 implements Title IX of the Education Amendments of 1972. 40 C.F.R. Part 7 implements Title VI of the Civil Rights Act of 1964, Section 13 of the 1972 Amendments to the Federal Water Pollution Control Act, and Section 504 of The Rehabilitation Act of 1973. The Executive Order 13166 (E.O. 13166) entitled; "Improving Access to Services for Persons with Limited English Proficiency" requires Federal agencies work to ensure that recipients of Federal financial assistance provide meaningful access to their LEP applicants and beneficiaries.

Items "Applicant" means any entity that files an application or unsolicited proposal or otherwise requests EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Recipient" means any entity, other than applicant, which will actually receive EPA assistance. 40 C.F.R. §§ 5.105, 7.25. "Civil rights lawsuits and administrative complaints" means any lawsuit or administrative complaint alleging discrimination on the basis of race, color, national origin, sex, age, or disability pending or decided against the applicant and/or entity which actually benefits from the grant, but excluding employment complaints not covered by 40 C.F.R. Parts 5 and 7. For example, if a city is the named applicant but the grant will actually benefit the Department of Sewage, civil rights lawsuits involving both the city and the Department of Sewage should be listed. "Civil rights compliance review" means any review assessing the applicant's and/or recipient's compliance with laws prohibiting discrimination on the basis of race, color, national origin, sex, age, or disability. Submit this form with the original and required copies of applications, requests for extensions, requests for increase of funds, etc. Updates of information are all that are required after the initial application submission. If any item is not relevant to the project for which assistance is requested, write "NA" for "Not Applicable." In the event applicant is uncertain about how to answer any questions, EPA program officials should be contacted for clarification. * Note: Signature appears in the Approval Section of the EPA Comprehensive Administrative Review For Grants/Cooperative Agreements & Continuation/Supplemental Awards form.

EPA KEY CONTACTS FORM

OMB Number: 2030-0020
Expiration Date: 06/30/2024

Authorized Representative: *Original awards and amendments will be sent to this individual for review and acceptance, unless otherwise indicated.*

Name: Prefix: Mrs. First Name: Betty Middle Name:
Last Name: Voights Suffix:
Title: Executive Director

Complete Address:

Street1: 6800 Burleson Road
Street2: Building 310, Suite 165
City: Austin State: TX: Texas
Zip / Postal Code: 78744-2325 Country: USA: UNITED STATES
Phone Number: 512-916-6000 **Fax Number:** 512-916-6001
E-mail Address: bvoights@capcog.org

Payee: *Individual authorized to accept payments.*

Name: Prefix: Mrs. First Name: Silvia Middle Name:
Last Name: Alvarado Suffix:
Title: Director of Finance

Complete Address:

Street1: 6800 Burleson Road
Street2: Building 310, Suite 165
City: Austin State: TX: Texas
Zip / Postal Code: 78744-2325 Country: USA: UNITED STATES
Phone Number: 512-916-6000 **Fax Number:** 512-916-6001
E-mail Address: salvarado@capcog.org

Administrative Contact: *Individual from Sponsored Programs Office to contact concerning administrative matters (i.e., indirect cost rate computation, rebudgeting requests etc).*

Name: Prefix: Mr. First Name: Anwar Middle Name:
Last Name: Sophy Suffix:
Title: Deputy Executive Director

Complete Address:

Street1: 6800 Burleson Road
Street2: Building 310, Suite 165
City: Austin State: TX: Texas
Zip / Postal Code: 78744-2325 Country: USA: UNITED STATES
Phone Number: 512-916-6009 **Fax Number:** 512-916-6001
E-mail Address: asophy@capcog.org

EPA KEY CONTACTS FORM

Project Manager: *Individual responsible for the technical completion of the proposed work.*

Name: Prefix: Mr. First Name: Andrew Middle Name:

Last Name: Hoekzema Suffix:

Title: Director of Regional Planning and Services

Complete Address:

Street1: 6800 Burleson Road

Street2: Building 310, Suite 165

City: Austin State: TX: Texas

Zip / Postal Code: 78744-2325 Country: USA: UNITED STATES

Phone Number: 512-916-6043 **Fax Number:** 512-916-6001

E-mail Address: ahoekzema@capcog.org

EPA Form 5700-54 (Rev 4-02)

RESOLUTION 2022-11

A RESOLUTION IN SUPPORT OF THE CAPITAL AREA COUNCIL OF GOVERNMENTS' APPLICATION FOR ENHANCED FINE PARTICULATE MATTER MONITORING IN CENTRAL TEXAS

WHEREAS, air quality can threaten our environment, economy, and the health of the residents of City of Lockhart, Texas; and

WHEREAS, air pollution levels in Central Texas were considered "moderate" or worse on thirty-six percent of days in 2021, according to the National Air Quality Index (AQI); and

WHEREAS, children, older adults, people with lung disease and people with heart disease are particularly affected by poor air quality, and make up about two out of every five residents in Central Texas; and

WHEREAS, fine particulate matter levels ($PM_{2.5}$) cause the majority of the "moderate" air pollution days in the Austin-Round Rock-Georgetown Metropolitan Statistical Area; and

WHEREAS, enhanced monitoring of $PM_{2.5}$ is important not only for public health, but also for understanding the sources and effects of $PM_{2.5}$ pollution on the region's vulnerable communities;

WHEREAS, City of Lockhart is a member of the Central Texas Clean Air Coalition and actively involved in the region's ongoing air quality planning efforts.

WHEREAS, City of Lockhart participates in the Regional Air Quality Plan, whose objectives are to maximize the probability of compliance with the National Ambient Air Quality Standards region-wide and to minimize the health and environmental impacts of regional air pollution.

THEREFORE, BE IT RESOLVED, that City of Lockhart, Texas supports CAPCOG's application for enhanced $PM_{2.5}$ monitoring in Central Texas.

Resolution adopted by the City Council of the City of Lockhart on this 1st day of March, 2022.

CITY OF LOCKHART

Lew White
Mayor

ATTEST:

Connie Constancio, TRMC
City Secretary

APPROVED AS TO FORM:

Monte Akers
City Attorney

RESOLUTION NO. R-2022-34

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BASTROP, TEXAS IN SUPPORT OF THE CAPITAL AREA COUNCIL OF GOVERNMENTS' APPLICATION FOR ENHANCED FINE PARTICULATE MATTER MONITORING IN CENTRAL TEXAS; AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, air quality can threaten our environment, economy, and the health of the residents of the City of Bastrop; and

WHEREAS, air pollution levels in Central Texas were considered "moderate" or worse on thirty-six percent of days in 2021, according to the National Air Quality Index (AQI); and

WHEREAS, children, older adults, people with lung disease and people with heart disease are particularly affected by poor air quality, and make up about two out of every five residents in Central Texas; and

WHEREAS, fine particulate matter levels ($PM_{2.5}$) cause the majority of the "moderate" air pollution days in the Austin-Round Rock-Georgetown Metropolitan Statistical Area; and

WHEREAS, enhanced monitoring of $PM_{2.5}$ is important not only for public health, but also for understanding the sources and effects of $PM_{2.5}$ pollution on the region's vulnerable communities; and

WHEREAS, the City of Bastrop is a member of the Central Texas Clean Air Coalition and actively involved in the region's ongoing air quality planning efforts; and

WHEREAS, the City of Bastrop participates in the Regional Air Quality Plan, whose objectives are to maximize the probability of compliance with the National Ambient Air Quality Standards region-wide and to minimize the health and environmental impacts of regional air pollution.

THEREFORE, BE IT RESOLVED, that the City of Bastrop supports CAPCOG's application for enhanced $PM_{2.5}$ monitoring in Central Texas.

DULY RESOLVED AND ADOPTED by the City Council of the City of Bastrop this 8th day of February 2022.

APPROVED:

Connie B. Schroeder, Mayor

ATTEST:

Ann Franklin, City Secretary

APPROVED AS TO FORM:

Alan Bojorquez, City Attorney

The University of Texas at Austin
Center for Health and Environment, Education and Research
Dell Medical School
CHEER · Health Discovery Building · 1601 Trinity St., Bldg B · Austin, TX 78712 · CHEER.health@austin.utexas.edu

March 2, 2022

Andrew Hoekzema, Director of Regional Planning and Services
Capital Area Council of Governments
6800 Burleson Road, Building 310, Suite 165
Austin, TX 78744

Dear Mr. Hoekzema,

The UT Austin Center for Health and the Environment: Education and Research (CHEER) is excited to support the Capital Area Council of Governments (CAPCOG) and other local partners on CAPCOG's application for enhanced fine particulate matter ($PM_{2.5}$) monitoring in Central Texas. **CHEER** is the hub for multidisciplinary environmental health sciences research and education at UT Austin.

UT Austin is a member of CLEAN AIR Force (CAF) of Central Texas' Clean Air Partners Program and **CHEER** is actively involved in the region's ongoing air quality planning efforts. **CHEER** is supportive of the Regional Air Quality Plan, whose objectives are to maximize the probability of compliance with the National Ambient Air Quality Standards region-wide and to minimize the health and environmental impacts of regional air pollution.

If CAPCOG is awarded funding for this project, **CHEER** agrees to support CAPCOG with the following activities:

- Support efforts to solicit community input and engagement on site selection and make recommendations to the CACAC and CAC;
- Promote public awareness of the data collected from the project and outreach and education materials that support the project.

CLEAN AIR Force (CAF) of Central Texas' Clean Air Partners Program includes organizations outside of the CAC. The Clean Air Partners is a way to encourage businesses to act and make an impact on air quality.

As one of CAPCOG's partners in promoting air quality within the region, **CHEER** would view our involvement with this project as an extension of our commitment to clean air in Central Texas. **CHEER** appreciates the opportunity to participate.

Sincerely,

Elizabeth Matsui

Elizabeth C. Matsui, MD MHS
Director, Center for Health and Environment, Education and Research
Professor of Population Health and Pediatrics

RESOLUTION NO. 1280

A RESOLUTION IN SUPPORT OF THE CAPITAL AREA COUNCIL OF GOVERNMENTS' APPLICATION FOR ENHANCED FINE PARTICULATE MATTER MONITORING IN CENTRAL TEXAS

WHEREAS, air quality can threaten our environment, economy, and the health of the residents of the City of Kyle; and

WHEREAS, air pollution levels in Central Texas were considered "moderate" or worse on thirty-six percent of days in 2021, according to the National Air Quality Index (AQI); and

WHEREAS, children, older adults, people with lung disease and people with heart disease are particularly affected by poor air quality, and make up about two out of every five residents in Central Texas: and

WHEREAS, fine particulate matter levels ($PM_{2.5}$) cause the majority of the "moderate" air pollution days in the Austin-Round Rock-Georgetown Metropolitan Statistical Area; and

WHEREAS, enhanced monitoring of $PM_{2.5}$ is important not only for public health, but also for understanding the sources and effects of $PM_{2.5}$ pollution on the region's vulnerable communities:

WHEREAS, the City of Kyle is a member of the Central Texas Clean Air Coalition and actively involved in the region's ongoing air quality planning efforts.

WHEREAS, the City of Kyle participates in the Regional Air Quality Plan, whose objectives are to maximize the probability of compliance with the National Ambient Air Quality Standards region-wide and to minimize the health and environmental impacts of regional air pollution.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF KYLE, TEXAS:

THAT, the City Council of the City of Kyle, Texas does hereby supports CAPCOG's application for enhanced $PM_{2.5}$ monitoring in Central Texas.

PASSED AND APPROVED by the City of Kyle, TX on the 1st day of March, 2022.

THE CITY OF KYLE, TEXAS

Travis Mitchell, Mayor

ATTEST:

Jennifer Holm, City Secretary

RESOLUTION NO. 1954-22-03-08-0971

RESOLUTION OF THE CITY OF PFLUGERVILLE, TEXAS SUPPORTING THE CAPITAL AREA COUNCIL OF GOVERNMENTS' APPLICATION FOR ENHANCED FINE PARTICULATE MATTER MONITORING IN CENTRAL TEXAS

WHEREAS, air quality can threaten our environment, economy, and the health of the residents of the City of Pflugerville; and

WHEREAS, air pollution levels in Central Texas were considered "moderate" or worse on thirty-six percent of days in 2021, according to the National Air Quality Index (AQI); and

WHEREAS, children, older adults, people with lung disease and people with heart disease are particularly affected by poor air quality, and make up about two out of every five residents in Central Texas; and

WHEREAS, fine particulate matter levels ($PM_{2.5}$) cause the majority of the "moderate" air pollution days in the Austin-Round Rock-Georgetown Metropolitan Statistical Area; and

WHEREAS, enhanced monitoring of $PM_{2.5}$ is important not only for public health, but also for understanding the sources and effects of $PM_{2.5}$ pollution on the region's vulnerable communities;

WHEREAS, the City of Pflugerville is a member of the Central Texas Clean Air Coalition and actively involved in the region's ongoing air quality planning efforts.

WHEREAS, City of Pflugerville participates in the Regional Air Quality Plan, whose objectives are to maximize the probability of compliance with the National Ambient Air Quality Standards region-wide and to minimize the health and environmental impacts of regional air pollution.

THEREFORE, BE IT RESOLVED, that the City of Pflugerville supports CAPCOG's application for enhanced $PM_{2.5}$ monitoring in Central Texas.

Passed and Approved this 8th of March, 2022

Doug Weiss, Mayor Pro Tem

ATTEST:

Trista Evans
City Secretary

OMB Number: 4040-0004
Expiration Date: 12/31/2022

Application for Federal Assistance SF-424

* 1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received: 03/25/2022

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Capital Area Council of Governments

* b. Employer/Taxpayer Identification Number (EIN/TIN): 74-1689381

* c. Organizational DUNS: 0917840530000

d. Address:

* Street1: 6800 Burleson Road
Street2: Building 310, Suite 165
* City: Austin
County/Parish: Travis
* State: TX: Texas
Province:
* Country: USA: UNITED STATES
* Zip / Postal Code: 78744-2325

e. Organizational Unit:

Department Name:

Division Name: Regional Planning and Services

f. Name and contact information of person to be contacted on matters involving this application:

Prefix: Mr.
* First Name: Andrew
Middle Name:
* Last Name: Hoekzema
Suffix:

Title: Director of Regional Planning and Services

Organizational Affiliation:

* Telephone Number: 512-916-6043
Fax Number: 512-916-6001

* Email: ahoekzema@capcog.org

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

E: Regional Organization

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Environmental Protection Agency

11. Catalog of Federal Domestic Assistance Number:

66.034

CFDA Title:

Surveys, Studies, Research, Investigations, Demonstrations, and Special Purpose Activities Relating to the Clean Air Act

*** 12. Funding Opportunity Number:**

EPA-OAR-OAQPS-22-01

* Title:

Enhanced Air Quality Monitoring for Communities

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

1239-Area Affected By Project.pdf | Add Attachment | Delete Attachment | View Attachment

*** 15. Descriptive Title of Applicant's Project:**

Enhanced Continuous PM2.5 Monitoring in the Austin-Round Rock-Georgetown Metro Area

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant: TX-035 * b. Program/Project: TX-010

Attach an additional list of Program/Project Congressional Districts if needed.

1240-SF-424 Congressional District Attachm | Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 10/01/2022 * b. End Date: 09/30/2025

18. Estimated Funding ($):

* a. Federal	453,732.00
* b. Applicant	0.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	453,732.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment | Delete Attachment | View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: Mrs. * First Name: Betty

Middle Name:

* Last Name: Voights

Suffix:

* Title: Executive Director

* Telephone Number: 512-916-6000 Fax Number: 512-916-6001

* Email: bvoights@capcog.org

* Signature of Authorized Representative: Sheila Jennings * Date Signed: 03/25/2022

Manifest for Grant Application # GRANT13580301

Grant Application XML file (total 1):

1. GrantApplication.xml. (size 29202 bytes)

Forms Included in Zip File(total 6):

1. Form ProjectNarrativeAttachments_1_2-V1.2.pdf (size 16014 bytes)

2. Form SF424_3_0-V3.0.pdf (size 24228 bytes)

3. Form SF424A-V1.0.pdf (size 23232 bytes)

4. Form EPA4700_4_3_0-V3.0.pdf (size 22833 bytes)

5. Form OtherNarrativeAttachments_1_2-V1.2.pdf (size 15912 bytes)

6. Form EPA_KeyContacts_2_0-V2.0.pdf (size 37378 bytes)

Attachments Included in Zip File (total 7):

1. ProjectNarrativeAttachments_1_2 ProjectNarrativeAttachments_1_2-Attachments-1234-Project Narrative_Continuous.pdf application/pdf (size 310215 bytes)

2. SF424_3_0 SF424_3_0-1240-SF-424 Congressional District Attachment.pdf application/pdf (size 41285 bytes)

3. SF424_3_0 SF424_3_0-1239-Area Affected By Project.pdf application/pdf (size 40849 bytes)

4. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1236-Attachment 2_Letters of Parternship.pdf application/pdf (size 1765512 bytes)

5. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1235-Attachment 1_Quality Assurance Statement_Continuous.pdf application/pdf (size 144306 bytes)

6. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1238-Attachment 4_Resumes and CVs.pdf application/pdf (size 5814971 bytes)

7. OtherNarrativeAttachments_1_2 OtherNarrativeAttachments_1_2-Attachments-1237-Attachment 3_Resolutions and Letters of Support.pdf application/pdf (size 716686 bytes)

Other Attachment File(s)

*** Mandatory Other Attachment Filename:** 1235-Attachment 1_Quality Assurance Statement_Cont

Add Mandatory Other Attachment | Delete Mandatory Other Attachment | View Mandatory Other Attachment

To add more "Other Attachment" attachments, please use the attachment buttons below.

Add Optional Other Attachment | Delete Optional Other Attachment | View Optional Other Attachment

BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006
Expiration Date: 02/28/2022

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Enhanced Continuous PM2.5 Monitoring in the Austin-Round Rock-Georgetown Metro Area	66.034	$ 453,732.00	$ 0.00	$ 0.00	$ 0.00	$ 453,732.00
2.						
3.						
4.						
5. Totals		$ 453,732.00	$ 0.00	$ 0.00	$ 0.00	$ 453,732.00

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SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY (1)	(2)	(3)	(4)	Total (5)
	Enhanced Continuous PM2.5 Monitoring in the Austin-Round Rock-Georgetown Metro Area				
a. Personnel	$ 28,585.00	$	$	$	$ 28,585.00
b. Fringe Benefits	14,699.00				14,699.00
c. Travel	615.00				615.00
d. Equipment	126,000.00				126,000.00
e. Supplies	19,200.00				19,200.00
f. Contractual	194,459.00				194,459.00
g. Construction	0.00				0.00
h. Other	66,357.00				66,357.00
i. Total Direct Charges (sum of 6a-6h)	449,915.00				$ 449,915.00
j. Indirect Charges	3,817.00				$ 3,817.00
k. TOTALS (sum of 6i and 6j)	$ 453,732.00	$	$	$	$ 453,732.00
7. Program Income	$ 0.00	$	$	$	$ 0.00

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SECTION C - NON-FEDERAL RESOURCES

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e)TOTALS
8. Enhanced Continuous PM2.5 Monitoring in the Austin-Round Rock-Georgetown Metro Area	$ 0.00	$ 0.00	$ 0.00	$ 0.00
9.				
10.				
11.				
12. TOTAL (sum of lines 8-11)	$ 0.00	$ 0.00	$ 0.00	$ 0.00

SECTION D - FORECASTED CASH NEEDS

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	$ 244,344.00	$ 9,455.00	$ 154,860.00	$ 51,525.00	$ 28,504.00
14. Non-Federal	$				
15. TOTAL (sum of lines 13 and 14)	$ 244,344.00	$ 9,455.00	$ 154,860.00	$ 51,525.00	$ 28,504.00

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) Grant Program	FUTURE FUNDING PERIODS (YEARS) (b)First	(c) Second	(d) Third	(e) Fourth
16. Enhanced Continuous PM2.5 Monitoring in the Austin-Round Rock-Georgetown Metro Area	$ 244,344.00	$ 114,221.00	$ 95,167.00	$
17.				
18.				
19.				
20. TOTAL (sum of lines 16 - 19)	$ 244,344.00	$ 114,221.00	$ 95,167.00	$

SECTION F - OTHER BUDGET INFORMATION

21. Direct Charges: 449,915.00

22. Indirect Charges: 3,817.00

23. Remarks:

Authorized for Local Reproduction

Area Affected By Project:

Austin-Round Rock-Georgetown Metropolitan Statistical Area, Texas – Bastrop, Caldwell, Hays, Travis, and Williamson Counties

SF-424 Congressional District Attachment

16. Congressional Districts of:

a. Applicant: TX-035

b. Program/Project: TX-010, TX-015, TX-017, TX-021, TX-025, TX-027, TX-031, and TX-035

Quality Assurance Statement for CAPCOG's EPA Grant Application for Enhanced Air Quality Monitoring for Communities for Enhanced Continuous $PM_{2.5}$ Monitoring in the Austin-Round Rock-Georgetown Metro Area

PROJECT DESCRIPTION AND OBJECTIVES

The purpose of this project is to collect continuous, ambient fine particulate matter ($PM_{2.5}$) concentrations at seven sites in the Austin-Round Rock-Georgetown Metropolitan Statistical Area (MSA) from July 1, 2023, to June 30, 2025. Additionally, 20 particulate matter (PM) sensors will be deployed for the project timeframe. The environmental systems that will be evaluated are ambient ground-level $PM_{2.5}$ concentrations from the stationary monitors and sensors.

The purpose of this monitoring is for regional research purposes, and it is not to assess compliance with the $PM_{2.5}$ National Ambient Air Quality Standard (NAAQS). Rather, these data are useful for:

- Developing and improving the scientific understanding of regional $PM_{2.5}$ air pollution;
- Understanding historical trends in $PM_{2.5}$ air pollution;
- Characterizing $PM_{2.5}$ concentrations in specific geographic locations within the region;
- Tracking the spatial distribution of $PM_{2.5}$ in the region; and
- Evaluating population exposures to air pollutants.

PROJECT PERSONNEL AND ORGANIZATION

The Capital Area Council of Government's (CAPCOG's) $PM_{2.5}$ monitoring would be carried out by a professional vendor offering Air Quality Monitoring Services. CAPCOG would issue a Request for Proposals (RFP) for the maintenance and operation of the $PM_{2.5}$ monitors for the project timeframe. CAPCOG will post the RFP publicly and send the RFP announcement to vendor's on the Texas Comptroller's Centralized Master Bidders List that offer Air Quality Monitoring Services (Commodity Code 926-15) in Highway District 14 (TxDOT-Austin).[1] A contractor will be selected based on their experience and expertise in operating and maintaining $PM_{2.5}$ monitors.

CAPCOG's Director of Regional Planning and Services, Mr. Andrew Hoekzema, will supervise this EPA contract, while CAPCOG's Air Quality Program Manager, Mr. Anton Cox, will supervise CAPCOG's contract with the selected vendor. The selected contractor will carry out the day-to-day work needed to carry out any maintenance and operation procedures. Mr. Cox will review monthly reports submitted by the contractor to ensure that procedures were carried out properly and will provide direction to the contractor as issues arise. Mr. Cox reports to Mr. Hoekzema within CAPCOG's Regional Planning and Services division, and any work performed by Mr. Cox on this project will be supervised by Mr. Hoekzema.

University project partners and subaward recipients will be St. Edward's University (SEU) and Huston-Tillotson University (HT). The subawards will fund the training of faculty and students on the maintenance of the $PM_{2.5}$ monitors and data analysis such that the students can gain hands-on skills and expertise and increase their knowledge about air pollution. The university faculty and students will be trained by CAPCOG's selected contractor. For SEU, Dr. Paul Walter and Mr. Mark Estes will be the faculty working on this project. HT faculty working on this project are Dr. Amanda Masino and Dr. Wenxian Tan. University faculty and students will communicate with CAPCOG on their planned and performed activities. Any such work will be approved by CAPCOG.

[1]Texas Comptroller's Centralized Master Bidders List, https://mycpa.cpa.state.tx.us/tpasscmblsearch/tpasscmblsearch.do

QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES

Upon award of the grant, CAPCOG will develop a Quality Assurance Project Plan (QAPP) for the maintenance and operation of the $PM_{2.5}$ monitors and PM sensors. The $PM_{2.5}$ monitors that CAPCOG will use for this project will meet EPA's "List of Designated Reference and Equivalent Methods."[2] The $PM_{2.5}$ monitors will run from July 1, 2023, to June 30, 2025. The maintenance and operation of the $PM_{2.5}$ monitors will be performed by CAPCOG's contractor. CAPCOG will ensure that the $PM_{2.5}$ monitors are maintained and operated in accordance with the monitor's operation manual from the manufacturer. Additionally, CAPCOG will require that the selected contractor follow the Standard Operating Procedures (SOPs) for the maintenance and operation of the monitors that are listed in EPA's "Quality Assurance Guidance Document 2.12 - Monitoring $PM_{2.5}$ in Ambient Air Using Designated Reference or Class I Equivalent Methods"[3] or a more recent EPA document, if available at the time of the development of a QAPP.

The collected $PM_{2.5}$ data will be reviewed daily by CAPCOG's contractors to ensure that the data collected appears accurate and that there are no issues with the monitors. Any suspicious data will be flagged for an in-depth review. All of the collected $PM_{2.5}$ data will be evaluated for acceptability by CAPCOG's contractors using the methods described in EPA's "Quality Assurance Guidance Document 2.12 - Monitoring $PM_{2.5}$ in Ambient Air Using Designated Reference or Class I Equivalent Methods".

Hourly valid data will be reported to EPA's AirNow. The submitted data on AirNow will be compared to other collected $PM_{2.5}$ data in the region to ensure consistency and validity.

The PM sensors will be installed and operated in accordance with the manufacturer's guidelines. Each sensor will be checked monthly to ensure that the sensor is cleared of any obstructions, such as insect nests, and that the sensor is reporting data.

Any other actions or activities not explicitly listed in this statement will follow EPA's "Quality Assurance Guidance Document 2.12 - Monitoring $PM_{2.5}$ in Ambient Air Using Designated Reference or Class I Equivalent Methods."

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[2] EPA, List of Designated Reference and Equivalent Methods, December 15, 2021, https://www.epa.gov/system/files/documents/2021-12/designated-referene-and-equivalent-methods-12152021.pdf

[3] EPA, Quality Assurance Guidance Document 2.12 - Monitoring $PM_{2.5}$ in Ambient Air Using Designated Reference or Class I Equivalent Methods, January 2016, https://www.epa.gov/sites/default/files/2021-03/documents/p100oi8x.pdf

ST. EDWARD'S UNIVERSITY

Office of the Provost

March 8, 2022

Andrew Hoekzema, Director of Regional Planning and Services
Capital Area Council of Governments
6800 Burleson Road, Building 310, Suite 165
Austin, TX 78744

Dear Mr. Hoekzema,

St. Edward's University (SEU) is excited to partner with the Capital Area Council of Governments (CAPCOG), and other local partners on CAPCOG's application for enhanced fine particulate matter (PM 2.5) monitoring in Central Texas. SEU and CAPCOG have previously worked together on monitoring projects, and as a member of the Central Texas Clean Air Coalition (CAC), SEU is actively involved in the region's ongoing air quality planning efforts. If CAPCOG is awarded funding for this project, SEU agrees to serve as a subaward recipient to carry out the following activities:

- Participate in the vendor selection process for hiring a monitoring contractor;
- Participate in a Clean Air Coalition Advisory Committee (CACAC) Monitoring Subcommittee to solicit community input on site selection and make recommendations to the CACAC and CAC;
- Review and analyze the PM 2.5 monitoring data collected for CAPCOG;
- Receive training in the operation and maintenance of the PM 2.5 monitoring equipment;
- Following the end of the grant period, use training received under this grant to sustain the enhanced PM 2.5 monitoring to the extent possible.

Participating faculty from SEU will include Dr. Paul Walter, Associate Professor of Physics and Mr. Mark Estes, Research Associate and an atmospheric scientist with over 26 years of experience working on air quality at the Texas Commission on Environmental Quality (TCEQ). During the last summer of the grant period, SEU faculty will recruit and train a student in operating and maintaining the equipment.

Founded in 1885, SEU is a liberal arts and sciences university in Austin committed to providing a diverse student body with an education that emphasizes critical thinking, social justice, and ethical practice. SEU serves approximately 3,600 students, including 2,991 traditional undergraduates, 23 nontraditional undergraduates, and 577 graduate students. SEU has qualified as a Hispanic-Serving Institution for more than three decades and has distinguished itself in service to students historically underrepresented in higher education. Hispanics/Latinos represent 49.2% of our total undergraduate student body, and minorities encompass 59.9% of the enrolled class for Fall 2020. As one of CAPCOG's partners in promoting air quality within the region, we would view our involvement with this project as an extension of our mission, and SEU appreciates the opportunity to participate.

Sincerely,

Marianne Ward-Peradoza

Marianne Ward-Peradoza, Ph.D.
Interim Provost

HUSTON-TILLOTSON UNIVERSITY
1875 AUSTIN, TEXAS

March 9, 2022

Andrew Hoekzema, Director of Regional Planning and Services
Capital Area Council of Governments
6800 Burleson Road, Building 310, Suite 165
Austin, TX 78744

Dear Mr. Hoekzema,

Huston-Tillotson University (HT) is excited to partner with the Capital Area Council of Governments (CAPCOG), and other local partners on CAPCOG's application for enhanced fine particulate matter ($PM_{2.5}$) monitoring in Central Texas. As a member of the Central Texas Clean Air Coalition (CAC), HT is actively involved in the region's ongoing air quality planning efforts and welcome the opportunity to expand our involvement through this application. If CAPCOG is awarded funding for this project, HT agrees to serve as a subaward recipient to carry out the following activities:

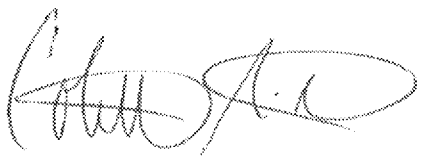
- Participate in the vendor selection process for hiring a monitoring contractor;
- Participate in a Clean Air Coalition Advisory Committee (CACAC) Monitoring Subcommittee to solicit community input on site selection and make recommendations to the CACAC and CAC;
- Review and analyze the $PM_{2.5}$ monitoring data collected for CAPCOG;
- Receive training in the operation and maintenance of the $PM_{2.5}$ monitoring equipment;
- Following the end of the grant period, use training received under this grant to sustain the enhanced $PM_{2.5}$ monitoring to the extent possible.

Participating faculty will include Dr. Amanda Masino and Dr. Wenxian Tan. Dr. Masino serves as HT's Chair of Natural Sciences, Associate Professor of Biology, and Director of STEM Research Scholars and Environmental Justice Program. Dr. Tan serves as Assistant Professor of Biology, lead investigator of HT's wildlife research project, and faculty in the Environmental Justice Program. During the last summer of the grant period, HT faculty will recruit and train a student in operating and maintaining the equipment.

HT is a private historically black college or university (HBCU) in Austin, Texas. Established in 1875, HT is affiliated with the United Methodist Church, the United Church of Christ, and the United Negro College Fund. HT serves a student population of about 1,000 predominantly African American (65%) and Hispanic (30%) students, most of whom qualify as high financial need (73% Pell-eligible) and many of whom are the first in their families to attend college

(50%). As one of CAPCOG's partners in promoting air quality within the region, we would view our involvement with this project as an extension of our mission. HT has a special interest in diversifying STEM and environmental career fields, and a strong commitment to environmental justice.HT appreciates the opportunity to advance these priorities with this project.

Sincerely,



Dr. Colette Pierce Burnette

President and CEO

City of Austin

301 W 2nd St, Austin, TX 78701

(512) 974-2000

March 18, 2022

Andrew Hoekzema, Director of Regional Planning and Services
Capital Area Council of Governments
6800 Burleson Road, Building 310, Suite 165
Austin, TX 78744

Dear Mr. Hoekzema,

The City of Austin is excited to partner with the Capital Area Council of Governments (CAPCOG) and other local partners on CAPCOG's application to the Environmental Protection Agency for enhanced fine particulate matter ($PM_{2.5}$) monitoring in Central Texas. The City of Austin is a member of the Central Texas Clean Air Coalition (CAC) and is actively involved in the region's ongoing air quality planning efforts. The City of Austin participates in the Regional Air Quality Plan, whose objectives are to maximize the probability of compliance with the National Ambient Air Quality Standards region-wide and to minimize the health and environmental impacts of regional air pollution.

If CAPCOG is awarded funding for this project, the City of Austin agrees to partner with CAPCOG to carry out the following activities:

- Participate in the vendor selection process for hiring a monitoring contractor;
- Participate in the site selection process through involvement in the CAC Advisory Committee (CACAC);
- Participate in the CACAC Monitoring Subcommittee to solicit community input and engagement on site selection and make recommendations to the CACAC and CAC;
- Promote public awareness of the data collected from the project and outreach and education materials that support the project.

Founded in 2002, the CAC is a voluntary, unincorporated association that facilitates the development, adoption, and implementation of clean air plans to promote a regional effort toward the improvement of air quality for Bastrop, Caldwell, Hays, Travis, and Williamson counties.

As one of CAPCOG's partners in promoting air quality within the region, the City of Austin would view our involvement with this project as an extension of our commitment to clean air in Central Texas. The City of Austin appreciates the opportunity to participate.

Sincerely,

Council Member Paige Ellis
City of Austin representative to the Central Texas Clean Air Coalition
1st Vice Chair of the Central Texas Clean Air Coalition

Lucia Athens
Chief Sustainability Officer
City of Austin Office of Sustainability

Rob Spillar (Jim Dale for Rob Spillar)
Director
Austin Transportation Department

TRANSPORTATION AND NATURAL RESOURCES
CYNTHIA C. MCDONALD, COUNTY EXECUTIVE

Travis County Administration Building
700 Lavaca Street-5th Floor
P.O. Box 1748
Austin, Texas 78767
Phone: (512) 854-9383
Fax: (512) 854-4697

Andrew Hoekzema, Director of Regional Planning and Services
Capital Area Council of Governments
6800 Burleson Road, Building 310, Suite 165
Austin, TX 78744

March 1, 2022

Re: Travis County Support for CAPCOG Grant Application for Enhanced $PM_{2.5}$ Monitoring

Dear Mr. Hoekzema:

Travis County is pleased to partner with the Capital Area Council of Governments (CAPCOG) and other local partners on CAPCOG's application for enhanced fine particulate matter ($PM_{2.5}$) monitoring in Central Texas. Travis County is a founding member of the Central Texas Clean Air Coalition (CAC) and is actively involved in the region's ongoing air quality planning efforts. The County participates in the Regional Air Quality Plan, whose objectives are to maximize the probability of compliance with the National Ambient Air Quality Standards region-wide and to minimize the health and environmental impacts of regional air pollution. Our participation in enhanced $PM_{2.5}$ monitoring is consistent with our existing mission to protect and enhance air quality for the benefit of all citizens of Travis County.

If CAPCOG is awarded funding for this project, the Travis County Transportation and Natural Resources Department's Division of Natural Resources and Environmental Quality will work with CAPCOG to carry out the following activities:

- Participate in the vendor selection process for hiring a monitoring contractor;
- Participate in the site selection process through involvement in the CAC Advisory Committee (CACAC);
- Participate in the CACAC Monitoring Subcommittee to solicit community input and engagement on site selection and make recommendations to the CACAC and CAC;
- Promote public awareness of the data collected from the project and outreach and education materials that support the project.

Founded in 2002, the CAC is a voluntary, unincorporated association that facilitates the development, adoption, and implementation of clean air plans to promote a regional effort toward the improvement of air quality for Bastrop, Caldwell, Hays, Travis, and Williamson counties. CAC members include local governments, non-profit organizations, universities, Texas state departments, and private point source pollution operators.

As one of CAPCOG's partners in promoting air quality within the region, we would view our involvement with this project as an extension of our commitment to clean air in Central Texas. Travis County appreciates the opportunity to participate.

Yours truly,

Jon A. White

Jon A. White
Director, Natural Resources & Environmental Quality Division
Travis County Transportation & Natural Resources Department
512/854-7212

cc: Travis County Judge Andy Brown
Members of the Travis County Commissioners Court
C. McDonald, County Executive, TNR

21 February 2022

Andrew Hoekzema, Director of Regional Planning and Services
Capital Area Council of Governments
6800 Burleson Road, Building 310, Suite 165
Austin, TX 78744

Dear Mr. Hoekzema,

Lone Star Clean Fuels Alliance (LSCFA) is excited to partner with the Capital Area Council of Governments (CAPCOG) and other local partners on CAPCOG's application for enhanced fine particulate matter ($PM_{2.5}$) monitoring in Central Texas. **LSCFA** is a member of the Central Texas Clean Air Coalition (CAC), and **LSCFA** is actively involved in the region's ongoing air quality planning efforts. **LSCFA** participates in the Regional Air Quality Plan, whose objectives are to maximize the probability of compliance with the National Ambient Air Quality Standards region-wide and to minimize the health and environmental impacts of regional air pollution.

LSCFA is part of the Department of Energy's Clean Cities program. As one of ~80 local organizations carrying out the mission of this program through promoting the use of cleaner fuels, vehicles, fuels and technologies, we understand and strongly support air quality monitoring in our area.

If CAPCOG is awarded funding for this project, **LSCFA** agrees to partner with CAPCOG to carry out the following activities:

- Participate in the site selection process through involvement in the CAC Advisory Committee (CACAC);
- Promote public awareness of the data collected from the project and outreach and education materials that support the project.

Founded in 2002, the CAC is a voluntary, unincorporated association that facilitates the development, adoption, and implementation of clean air plans to promote a regional effort toward the improvement of air quality for Bastrop, Caldwell, Hays, Travis, and Williamson counties. CAC members include local governments, non-profit organizations, universities, Texas state departments, and private point source pollution operators.

As one of CAPCOG's partners in promoting air quality within the region, **LSCFA** would view our involvement with this project as an extension of our commitment to clean air in Central Texas. **LSCFA** appreciates the opportunity to participate.

Sincerely,

Elizabeth Munger

Elizabeth Munger
Director
Lone Star Clean Fuels Alliance
elizabeth@lonestarcfa.org

Feb. 18, 2022

Andrew Hoekzema, Director of Regional Planning and Services
Capital Area Council of Governments
6800 Burleson Road, Building 310, Suite 165
Austin, TX 78744

Dear Mr. Hoekzema,

The Clean Air Force of Central Texas is excited to partner with the Capital Area Council of Governments (CAPCOG) and other local partners on CAPCOG's application for enhanced fine particulate matter ($PM_{2.5}$) monitoring in Central Texas. The Clean Air Force of Central Texas is a member of the Central Texas Clean Air Coalition (CAC), and we are actively involved in the region's ongoing air quality planning efforts. Our organization participates in the Regional Air Quality Plan, whose objectives are to maximize the probability of compliance with the National Ambient Air Quality Standards region-wide and to minimize the health and environmental impacts of regional air pollution.

If CAPCOG is awarded funding for this project, the Clean Air Force of Central Texas agrees to partner with CAPCOG to carry out the following activities:

- Participate in the vendor selection process for hiring a monitoring contractor;
- Participate in the site selection process through involvement in the CAC Advisory Committee (CACAC);
- Participate in the CACAC Monitoring Subcommittee to solicit community input and engagement on site selection and make recommendations to the CACAC and CAC;
- Promote public awareness of the data collected from the project and outreach and education materials that support the project.

Founded in 2002, the CAC is a voluntary, unincorporated association that facilitates the development, adoption, and implementation of clean air plans to promote a regional effort toward the improvement of air quality for Bastrop, Caldwell, Hays, Travis, and Williamson counties. CAC members include local governments, non-profit organizations, universities, Texas state departments, and private point source pollution operators.

As one of CAPCOG's partners in promoting air quality within the region, the Clean Air Force of Central Texas would view our involvement with this project as an extension of our commitment to clean air in Central Texas. We appreciate the opportunity to participate.

Sincerely,

Bill Gibbs

Bill Gibbs, Executive Director
Clean Air Force of Central Texas
P.O. Box 29295, Austin, TX 78755

www.cleanairforce.org

CLEAN AIR FORCE
OF CENTRAL TEXAS

CEDAR PARK

March 11, 2022

Andrew Hoekzema, Director of Regional Planning and Services
Capital Area Council of Governments
6800 Burleson Road, Building 310, Suite 165
Austin, TX 78744

Dear Mr. Hoekzema,

The City of Cedar Park is excited to partner with the Capital Area Council of Governments (CAPCOG) and other local partners on CAPCOG's application for enhanced fine particulate matter ($PM_{2.5}$) monitoring in Central Texas. The City of Cedar Park is a member of the Central Texas Clean Air Coalition (CAC), and is actively involved in the region's ongoing air quality planning efforts. The City of Cedar Park participates in the Regional Air Quality Plan, whose objectives are to maximize the probability of compliance with the National Ambient Air Quality Standards region-wide and to minimize the health and environmental impacts of regional air pollution.

If CAPCOG is awarded funding for this project, The City of Cedar Park will support CAPCOG by participating in the site selection process through our involvement in the CAC Advisory Committee and by promoting public awareness of the data collected form the project.

As one of CAPCOG's partners in promoting air quality within the region, The City of Cedar Park would view our involvement with this project as an extension of our commitment to clean air in Central Texas, and appreciates the opportunity to participate.

Sincerely,

Corbin Van Arsdale
Mayor, City of Cedar Park

March 1, 2022

Andrew Hoekzema, Director of Regional Planning and Services
Capital Area Council of Governments
6800 Burleson Road, Building 310, Suite 165
Austin, TX 78744

Dear Mr. Hoekzema,

The City of Kyle is excited to partner with the Capital Area Council of Governments (CAPCOG) and other local partners on CAPCOG's application for enhanced fine particulate matter ($PM_{2.5}$) monitoring in Central Texas. The City of Kyle is a member of the Central Texas Clean Air Coalition (CAC) and is actively involved in the region's ongoing air quality planning efforts. The City of Kyle participates in the Regional Air Quality Plan, whose objectives are to maximize the probability of compliance with the National Ambient Air Quality Standards region-wide and to minimize the health and environmental impacts of regional air pollution.

If CAPCOG is awarded funding for this project, the City of Kyle agrees to partner with CAPCOG to carry out the following activities:

- Participate in the site selection process through involvement in the CAC Advisory Committee (CACAC), and
- Promote public awareness of the data collected from the project and outreach and education materials that support the project.

Founded in 2002, the CAC is a voluntary, unincorporated association that facilitates the development, adoption, and implementation of clean air plans to promote a regional effort toward the improvement of air quality for Bastrop, Caldwell, Hays, Travis, and Williamson counties. CAC members include local governments, non-profit organizations, universities, Texas state departments, and private point source pollution operators.

As one of CAPCOG's partners in promoting air quality within the region, the City of Kyle would view our involvement with this project as an extension of our commitment to clean air in Central Texas. The City of Kyle appreciates the opportunity to participate.

Sincerely,

Robert Rizo, Mayor Pro Tem
City of Kyle

March 9, 2022

Andrew Hoekzema, Director of Regional Planning and Services
Capital Area Council of Governments
6800 Burleson Road, Building 310, Suite 165
Austin, TX 78744

Dear Mr. Hoekzema,

The City of Pflugerville is excited to partner with the Capital Area Council of Governments (CAPCOG) and other local partners on CAPCOG's application for enhanced fine particulate matter ($PM_{2.5}$) monitoring in Central Texas. The City of Pflugerville is a member of the Central Texas Clean Air Coalition (CAC), and the City of Pflugerville is actively involved in the region's ongoing air quality planning efforts. The City of Pflugerville participates in the Regional Air Quality Plan, whose objectives are to maximize the probability of compliance with the National Ambient Air Quality Standards region-wide and to minimize the health and environmental impacts of regional air pollution.

If CAPCOG is awarded funding for this project, the City of Pflugerville agrees to partner with CAPCOG to carry out the following activities:

- Participate in the vendor selection process for hiring a monitoring contractor;
- Participate in the site selection process through involvement in the CAC Advisory Committee (CACAC);
- Participate in the CACAC Monitoring Subcommittee to solicit community input and engagement on site selection and make recommendations to the CACAC and CAC;
- Promote public awareness of the data collected from the project and outreach and education materials that support the project.

Founded in 2002, the CAC is a voluntary, unincorporated association that facilitates the development, adoption, and implementation of clean air plans to promote a regional effort toward the improvement of air quality for Bastrop, Caldwell, Hays, Travis, and Williamson counties. CAC members include local governments, non-profit organizations, universities, Texas state departments, and private point source pollution operators.

As one of CAPCOG's partners in promoting air quality within the region, the City of Pflugerville would view our involvement with this project as an extension of our commitment to clean air in Central Texas. The City of Pflugerville appreciates the opportunity to participate.

Sincerely,

Victor Gonzales
City of Pflugerville Mayor

Project Narrative File(s)

*** Mandatory Project Narrative File Filename:** 1234-Project Narrative_Continuous.pdf

Add Mandatory Project Narrative File | Delete Mandatory Project Narrative File | View Mandatory Project Narrative File

To add more Project Narrative File attachments, please use the attachment buttons below.

Add Optional Project Narrative File | Delete Optional Project Narrative File | View Optional Project Narrative File

Capital Area Council of Governments' EPA Grant Application for Enhanced Air Quality Monitoring for Communities

Cover Page

Project Title:

Enhanced Continuous $PM_{2.5}$ Monitoring in the Austin-Round Rock-Georgetown Metro Area

Applicant Information:

Applicant Organization: Capital Area Council of Governments (CAPCOG)

Address: 6800 Burleson Road, Building 310, Suite 165, Austin, TX 78744

Project Contact: Andrew Hoekzema, Director of Regional Planning and Services; (512) 916-6043; ahoekzema@capcog.org

DUNS Number: 09-178-4053

Set-Aside: No set-aside

Brief Description of Applicant Organization:

CAPCOG is one of 24 regional planning commissions in the State of Texas covering 10 counties around Austin. CAPCOG's Air Quality Program has led the region's voluntary air quality planning efforts since 2002, including operating a network of research-grade continuous air monitoring stations (CAMS) throughout the region. CAPCOG is considered a political subdivision of the state and qualifies as a "local government" for the purposes of this grant application.

Project Partners:

Partners that will receive subgrants under this application include St. Edward's University (primary contact – Dr. Paul Walter) and Huston-Tillotson University (primary contact – Dr. Amanda Masino). There will also be numerous other partners who will participate in monitoring site selection amongst the members of CAPCOG's Clean Air Coalition (CAC), which includes local governments, non-profits, businesses, and others.

Project Location:

Austin-Round Rock-Georgetown Metropolitan Statistical Area (Bastrop, Caldwell, Hays, Travis, and Williamson Counties) in Central Texas

Air Pollutant Scope:

The target air pollutant for this application is fine particulate matter ($PM_{2.5}$)

Budget Summary:

EPA Funding Requested	Total Project Cost
$453,732.00	$453,732.00

Project Period:

Start Date: October 1, 2022, End Date: September 30, 2025

Short Project Description:

CAPCOG proposes to operate seven research-grade continuous $PM_{2.5}$ monitors and to distribute 20 low-cost continuous particulate matter (PM) sensors in the region. Outputs will be continuous measurements of $PM_{2.5}$ concentrations in the MSA. Outcomes of the project will include improved understanding of where high levels of $PM_{2.5}$ occur in the region, improved $PM_{2.5}$ forecasting, enhanced local decision-making, better-targeted $PM_{2.5}$

emission reduction actions, reduction of the public's exposure to short-term $PM_{2.5}$ pollution, and expanded community capacity for future monitoring.

Workplan

Section 1: Project Summary and Approach

Overall Project

CAPCOG's Clean Air Coalition (CAC) recently decided to start participating in EPA's PM Advance Program in addition to its existing participation in EPA's ozone (O_3) Advance Program, making the Austin-Round Rock-Georgetown MSA the only area of Texas participating in the Advance Program for both O_3 and $PM_{2.5}$. Currently there are only three permanent continuous $PM_{2.5}$ monitors in the MSA, all of which are owned by the Texas Commission on Environmental Quality (TCEQ) and located in Travis County. CAPCOG's recent update to its regional air quality plan identified a need for better spatial coverage for $PM_{2.5}$ monitoring. CAPCOG proposes the installation of seven permanent continuous $PM_{2.5}$ monitors using Federal Reference Methods (FRM) or Federal Equivalent Methods (FEMs)[1], throughout the MSA. If seven continuous $PM_{2.5}$ monitors were installed, the MSA would have a total of 10 continuous $PM_{2.5}$ monitors, which is a comparable number of continuous $PM_{2.5}$ monitors in other similarly-sized metro such as Las Vegas, Cincinnati, and Cleveland.

The continuous $PM_{2.5}$ monitors' locations will be determined based on a community involvement process that will consider, among other factors, the national percentile environmental justice (EJ) Index for $PM_{2.5}$ from EPA's EJSCREEN, areas that do not have $PM_{2.5}$ monitoring resources already[2], areas with a COVID-19 disproportionate case burden, local community feedback, compatibility analyses for co-location at CAPCOG's existing O_3 CAMS, input from project partners, and other mapping tools for environmental and demographic factors. Once sites are chosen, CAPCOG plans to purchase and install MetOne's BAM 1022 monitors for continuous $PM_{2.5}$ data collection or a comparable FRM/FEM monitor that is capable of collecting and reporting 1-hour $PM_{2.5}$ concentrations. CAPCOG would procure monitors based on equipment availability, cost, and other factors at the time the grant is awarded. Continuous data collected by the $PM_{2.5}$ monitors will be reported to EPA's AirNow system and TCEQ's Leading Environmental Analysis and Display System (LEADS) (contingent on TCEQ's permission) so that the public can receive local near real-time air quality data and reduce their exposure to $PM_{2.5}$ pollution. Additionally, based on community input and priorities, CAPCOG plans to deploy 20 PurpleAir PM sensors in areas that were not chosen for a stationary monitor, but the community had expressed a need for PM pollution data collection.

In addition to the wide group of other project partners that will be involved in site selection, CAPCOG will offer subawards to St. Edward's University (SEU) and Huston-Tillotson University (HT) to train faculty and students on the maintenance of the $PM_{2.5}$ monitors and data analysis in order to help sustain monitoring beyond the grant period. Students can gain hands-on skills and expertise and increase their knowledge about air pollution, and faculty will be able to retain institutional knowledge of these skills for future monitoring. SEU is considered a Hispanic-Serving Institution (HSI) and HT is a Historically Black College/University (HBCU).

The $PM_{2.5}$ monitors and sensors will run from July 1, 2023 through June 30, 2025. After each year, CAPCOG will incorporate the collected data from the $PM_{2.5}$ monitors into CAPCOG's annual analysis of the prior year's air

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[1]EPA, List of Designated Reference and Equivalent Methods, December 15, 2021, https://www.epa.gov/system/files/documents/2021-12/designated-referene-and-equivalent-methods-12152021.pdf

[2] CAPCOG created an ArcGIS Web Map that displays current $PM_{2.5}$ monitoring locations, CAPCOG's CAMS locations, PurpleAir sensor locations, and 2020 EJSCREEN data for EJ Index for $PM_{2.5}$ (national and state percentiles), $PM_{2.5}$ Level in Air, and Percentile for $PM_{2.5}$ Level in Air (national and state).
CAPCOG, EPA ARP Monitoring Grant_PM Map with EJSCREEN and Monitors/Sensors, https://capcog.maps.arcgis.com/apps/webappviewer/index.html?id=aba27754583a4114952bdb1c15621bb0

quality data. In 2024, CAPCOG will evaluate options for continuing $PM_{2.5}$ monitoring in 2025 and beyond. These options may include local funding from CAC members, state funding (based on FY 2024-2025 available grant programs), or other funding sources. Depending on funding availability of this grant and future funding, sites and sensors could be scaled up or down, and/or the period of monitoring could be extended or shortened.

Project Significance

The Austin-Round Rock-Georgetown MSA's most recent certified annual $PM_{2.5}$ design value (2018-2020) was 9.6 $\mu g/m^3$, based on data at AQS Site 484530021 in Travis County, for the National Ambient Air Quality Standards (NAAQS). This design value puts Travis County's $PM_{2.5}$ concentrations higher than 88% of the rest of the counties for which EPA has design values, and this site's annual $PM_{2.5}$ design value is higher than 87% of all other monitoring sites in the country. The only $PM_{2.5}$ monitors in the MSA are located in central Travis County. Therefore, there is a need for $PM_{2.5}$ monitoring in communities in the other four MSA counties and possibly in other parts of Travis County. Additionally, most of the communities in the region that score high on EJSCREEN's $PM_{2.5}$ EJ Index (national percentile) do not have monitoring resources. Based on the 2020 Census, the region has a diverse population with 49% of the total population indicating a Hispanic/Latino origin or a race other than "White Alone." CAPCOG's analysis of PM modeling data showed that on average, Hispanic/Latino residents of the region and Non-Hispanic Black/African American residents are exposed to higher average $PM_{2.5}$ concentrations than Non-Hispanic Whites, similar to national trends. Also, Caldwell County has experienced a higher burden from COVID-19 than the state as a whole in terms of deaths and cases per capita. As the fastest-growing large metro area (>1 million people) in the nation, ensuring adequate monitoring in this region is important for keeping up with growth.

Continuous data collected by the $PM_{2.5}$ monitors would be reported to EPA's AirNow system and, possibly, TCEQ's LEADS system so that the public can receive local near real-time air quality data and reduce their exposure to $PM_{2.5}$ pollution. Additionally, PM sensors would allow expanded data collection in areas with PM concerns without a stationary monitor. The PurpleAir PM sensor data would be available to the public on the PurpleAir website and EPA's AirNow Fire and Smoke Map. CAPCOG will add value to the $PM_{2.5}$ data collected through $PM_{2.5}$ outreach and education (O&E) activities and materials to communities in the region. The O&E materials and activities also will be available in Spanish to reach the 20% of the MSA's population that is Spanish speaking only. The project partners for this grant will expand the reach of the O&E through their networks of communication and outreach.

CAPCOG wanted to ensure that its application would not be duplicating any monitoring efforts that the state may plan to undertake in the area. CAPCOG reached out to senior staff at TCEQ to determine if they had any plans to conduct additional $PM_{2.5}$ monitoring in the region or apply for any additional funding that could include TCEQ $PM_{2.5}$ monitoring in the region. TCEQ indicated that they did not plan on doing any additional $PM_{2.5}$ monitoring in the region and would be focusing any additional $PM_{2.5}$ monitoring resources that they may receive elsewhere unless required to add monitors in this region. While CAPCOG has funding to operate O_3 monitors, it lacks any other source of funding to operate $PM_{2.5}$ monitors.

Section 2: Community Involvement

Community Partnerships

CAPCOG is partnering with a variety of organizations. Two of CAPCOG's project partners and subaward recipients will be local universities, SEU and HT. SEU and HT will provide scientific expertise and input when choosing monitoring sites and assist in the community engagement of the project. Additionally, CAPCOG plans to train SEU and HT students and faculty on maintenance of the $PM_{2.5}$ monitors such that the faculty and students can gain hands-on skills to continue maintenance of the monitors after the grant ends. Additionally, the students will learn how to analyze the collected data. SEU is a HSI; Hispanics/Latinos represented 49.2% of SEU's total undergraduate student body, and minorities encompassed 59.9% of the enrolled class for Fall 2020. HT is a

HBCU; HT has a 65% Black and 27% Hispanic/Latino enrollment rate. Therefore, partnering with these two universities will further EPA goals to address environmental impacts on underserved racial and ethnic groups. Next, two of the project partners are the City of Austin, the largest city in the MSA, and Travis County, the largest county in the MSA. Based on the 2020 Census, City of Austin has a population of 961,855, and Travis County has a population of 1,290,188. Other project partners will be the local Department of Energy Clean Cities Coalition, Lone Star Clean Fuels Alliance, and three local cities – the City of Cedar Park in Williamson County, City of Kyle in Hays County, and the City of Pflugerville in Travis County. Additionally, CAPCOG is partnering with the Central Texas Clean Air Force (CAF), a non-profit organization. Since 1996, CAF has aided their membership base of local employers, who pledge to reduce air pollution-forming emissions. CAF will assist in the engagement and O&E to the business community in the region. Lastly, all of the CAC members are considered project partners by their commitment to participate in the CAC.

All of the project partners will be invited to participate in a CAC Advisory Committee (CACAC) Monitoring Subcommittee, which will review the community input and data analyses to help select the locations of the monitors and will help select a monitoring contractor. Additionally, all of the project partners will promote public awareness of the data collected from the project and share O&E materials that support the project. All of the project partners have experience in community engagement for a variety of environmental and social issues, including air quality. Through this project partnership, all partners will strengthen their understanding of $PM_{2.5}$ concentrations in their communities and their ability to assist their communities in reducing exposure to $PM_{2.5}$ pollution and reducing $PM_{2.5}$ emissions.

For 20 years, CAPCOG has worked with the organizations in the CAC to implement voluntary air quality plans and to maintain compliance with the NAAQS. The CAC is comprised of cities, counties, non-profit organizations, state agencies, universities, and point source operators in the MSA. These CAC members have advised and assisted with the development and implementation of the region's voluntary air quality plans, input for the current monitoring locations, emission reduction activities and commitments, O&E, policy issues and comments, and other planning activities. All project partners are members of the CAC so future partnerships and participation beyond the project period is expected.

Community Engagement

The community at large will be invited to review maps of air pollution and demographic data around the region to provide input on monitoring locations. The CACAC Monitoring Subcommittee will review and consider this input in the site selection process and the distribution of sensors. The project partners will be instrumental in soliciting broad and diverse community feedback throughout the project period. Some monitors may be located at CAPCOG's existing CAMS, but the exact locations will be decided after community involvement and feedback. Areas that did not receive a monitor, but a need was determined through community involvement, will be considered for PM sensors. Once the monitoring sites are operational, CAPCOG will continue community engagement through O&E on $PM_{2.5}$, in English and Spanish, with the assistance of the project partners. CAPCOG already has a robust O&E platform for regional air quality issues which is called Air Central Texas (ACT). The ACT website (www.AirCentralTexas.org) and O&E materials currently are being updated to include $PM_{2.5}$ specific information regardless of the grant award. The ACT website is available in English and Spanish; it is updated periodically with new data and information. O&E on $PM_{2.5}$ awareness and emission reduction activities will continue past the grant period. Throughout the lifetime of the operation of the $PM_{2.5}$ monitors and sensors, the collected data will be sent to EPA's AirNow so that the community can access and understand their near-real time $PM_{2.5}$ levels and future forecasted levels.

Section 3: Environmental Justice and Underserved Communities

In addition to analyzing current continuous $PM_{2.5}$ monitoring site data and co-location analyses with CAPCOG's current CAMS, CAPCOG will use community involvement, EJSCREEN's EJ Index for $PM_{2.5}$ (national percentile), the

Austin Area Sustainability Indicators (A2SI) dashboard[3], and data on COVID-19 burdens to inform where the seven $PM_{2.5}$ monitors will be located in the MSA. CAPCOG created a map to help guide the public input process and the subcommittee site selection process, and CAPCOG will update this map as new information is gathered.[4] The region is home to a significant number of Census Block Groups that are in the 90^{th}-99^{th} percentile for EPA's $PM_{2.5}$ EJ Index (national percentile), and these areas will be a major focus of this review. The A2SI dashboard maps air quality, population demographics, health, mobility, and the environment for the CAPCOG region. CAPCOG will use this A2SI platform to identify areas that have populations with high rates of emergency room visits for asthma (including children), wildfire exposure, average tree cover, households without a vehicle, and other environmental and demographic factors, as needed. Regarding COVID-19 disproportionate case burden, Caldwell County in the MSA has the highest ratio of confirmed cases to population in the region at 26%, and Caldwell County has experienced a higher burden from COVID-19 than the state as a whole in terms of deaths and cases per capita, according to the Texas Department of State Health Services[5]. CAPCOG will use these data and GIS data layers to help identify the locations where additional monitoring would be most useful. Areas that did not receive a research-grade monitor will be considered for PM sensors. Throughout the project period, CAPCOG will promote O&E activities and communications in English and Spanish, through the ACT platform. Additionally, CAPCOG will target EJ communities, identified through EJSCREEN's EJ Index for $PM_{2.5}$ (national percentile), the A2SI dashboard, and COVID-19 case data, for additional O&E on air quality and reduction in exposure to air pollution. Throughout the lifetime of the operation of the $PM_{2.5}$ monitors and sensors, the collected data will be analyzed and distributed for use by the region's communities.

Section 4: Environmental Results – Outputs, Outcomes, and Performance Measures

Expected Project Outputs and Outcomes

Outputs from this project will include near-real-time continuous measurements of $PM_{2.5}$ concentrations in the MSA streamed to EPA's AirNow System and TCEQ's LEADS system (if granted permission) for two years, along with reports documenting monitoring operations and data quality. Monitoring will occur in or near underserved communities and will enable improved characterization of unmonitored areas through modeling and data analysis. Community-specific assessments of the air pollution data will also be conducted. Through the site selection process, outreach and education, and the proposed training program, this project will also promote partnerships and community involvement.

A primary project outcome will improve understanding of where high levels of $PM_{2.5}$ occur in the region that may not currently be measured by existing monitors, especially in areas with underserved communities. Additionally, enhanced monitoring will provide informed local decision-making, targeted $PM_{2.5}$ emission reduction actions, and the reduction of the public's exposure to short-term $PM_{2.5}$ pollution when it occurs. Lastly, training in $PM_{2.5}$ monitoring equipment will allow the community to sustain the operation of the monitors and expanded community capacity for future monitoring past the grant period.

This project's outputs and outcomes will support EPA's FY 2022-2026 Strategic Plan Goal 4, "Ensure Clean and Healthy Air for All Communities;" Objective 4.1, "Improve Air Quality and Reduce Localized Pollution and Health Impacts."[6] By expanding $PM_{2.5}$ monitoring in a metro area with relatively high $PM_{2.5}$ concentrations and a high

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[3] Austin Area Sustainability Indicators (A2SI) Dashboard, https://rgk-center.shinyapps.io/A2SI_Explorer/

[4] CAPCOG created an ArcGIS Web Map that displays current $PM_{2.5}$ monitoring locations, CAPCOG's CAMS locations, PurpleAir sensor locations, and 2020 EJSCREEN data for EJ Index for $PM_{2.5}$ (national and state percentiles), $PM_{2.5}$ Level in Air, and Percentile for $PM_{2.5}$ Level in Air (national and state).
CAPCOG, EPA ARP Monitoring Grant_PM Map with EJSCREEN and Monitors/Sensors,
https://capcog.maps.arcgis.com/apps/webappviewer/index.html?id=aba27754583a4114952bdb1c15621bb0

[5] Texas Department of State Health Services, Texas COVID-19 Data, https://dshs.texas.gov/coronavirus/AdditionalData.aspx

[6] EPA, Draft FY 2022-2026 EPA Strategic Plan, October 1, 2021, https://www.epa.gov/planandbudget/strategicplan

share of Hispanic/Latino and Black/African American residents, this project would help better characterize localized air pollution for residents with a disproportionate air pollution burden. With the region's $PM_{2.5}$ levels at the high end of the range that EPA's Clean Air Scientific Advisory Committee (CASAC) has recommended for a new $PM_{2.5}$ NAAQS and no clear "threshold" for harm from $PM_{2.5}$ pollution, this project should help the region better address this public health and social problem.

Performance Measures and Plan

CAPCOG plans to measure performance primarily based on whether the project meets the timeline milestones. Quarterly reports will contain progress on milestones and purchase completion. Through monthly reports from the monitoring contractor, CAPCOG will be able to determine if the collected data is meeting an 85% data quality objective and completeness. CAPCOG will track and report on actual accomplishments versus proposed outputs/outcomes and proposed milestones. Once CAPCOG receives approval to proceed with the grant, CAPCOG will initiate procurement processes for equipment and a contractor, award subgrants to SEU and HT, and proceed with the site selection process simultaneously, with the goal of having all equipment installed and ready to be operated by June 30, 2023. If there are delays in this process, CAPCOG will shift the end of monitoring to ensure a full 2 years of data collection.

Several of the processes early in the grant period, including the procurement of equipment, the procurement of a monitoring vendor, and the site selection process, can commence as soon as CAPCOG receives award notification, rather than needing to wait until an actual grant agreement is executed. This would allow actual purchase orders and contracts to be issued and executed as quickly as possible after the grant agreement is executed. Therefore, while this project timeline is based on a 10/1/2022 start date, it would be functionally equivalent a 11/1/2022 or 12/1/2022 start date.

Through quarterly project reporting, annual monitoring reports, and the final project report, CAPCOG will monitor the progress of the project. Quarterly reports will summarize the technical progress of the project, including expenditures during the period, and provide an overview of planned activities for the next quarter. Any problems that arise will be discussed in the quarterly reports as well as a plan for corrective action if the issue remains. Updates on any such corrective actions will be detailed in the following quarterly report. The final report, which will be submitted to EPA within 120 days of the project period of performance, will include a summary of the project activity and data collected, and detail the costs of the project. The final report will also detail the advances in our understanding of PM in the region based on the data collected and other available supporting ancillary measurements. The final report will also address problems, be they structural, organizational, or technical in nature, and detail successes and other lessons learned during the project.

Timeline and Milestones

Milestone	Anticipated Date or Timeframe
Award Notification	August 2022
Grant Start Date	October 1, 2022
Analyses and Community Input and Engagement on Monitor and Sensor Site Selections, Procurement of Monitoring Equipment, Procurement of Monitoring Contractor	October 2022 - February 2023
Finalize Monitor and Sensor Site Selections	March 2023
Negotiate Site Lease Agreements, Acquire and Install Equipment	March 2023 – June 2023
Quarterly Report for 2023 1st Quarter Due	April 30, 2023

Milestone	Anticipated Date or Timeframe
SEU and HT Faculty Training on Monitor Maintenance and Operation	June 2023 – August 2023
Begin Monitoring	July 1, 2023
Quarterly Report for 2023 2nd Quarter Due	July 31, 2023
Quarterly Report for 2023 3rd Quarter Due	October 31, 2023
Quarterly Report for 2023 4th Quarter Due	January 31, 2024
Selection of HT and SEU Students for Summer 2024	March 30, 2024
Quarterly Report for 2024 1st Quarter Due	April 30, 2024
HT and SEU Faculty and Summer Students Monitor Daily Data and Train on Monitor Maintenance and Operation	June 2024 – August 2024
Evaluation of Options for Continuation of Monitors and Sensors Past Grant Period	June 30, 2024
Quarterly Report for 2024 2nd Quarter Due	July 31, 2024
2023 Austin-Round Rock-Georgetown MSA Annual Monitoring Report Finalized	July 31, 2024
Quarterly Report for 2024 3rd Quarter Due	October 31, 2024
Quarterly Report for 2024 4th Quarter Due	January 31, 2025
Quarterly Report for 2025 1st Quarter Due	April 30, 2025
Stop Monitor and Sensor Data Collection and Shut-Down Sites, if funding unavailable for continuation or continuation is impractical; otherwise, transfer responsibility for operations to SEU and HT	June 30, 2025
Quarterly Report for 2025 2nd Quarter Due	July 31, 2025
2024 Austin-Round Rock-Georgetown MSA Annual Monitoring Report Finalized	July 31, 2025
Submit Report on Data Analyses on Collected Data for and Monitor Operation and Maintenance Training for 2023-2024	August 15, 2025
Draft Grant Project Report Due, Quarterly Report for 2025 3rd Quarter Due	August 31, 2025
Final Grant Project Report Due and Project End Date	September 30, 2025

Section 5: Quality Assurance Statement

The Quality Assurance Statement is provided as an attachment to the project narrative.

Section 6: Programmatic Capability and Past Performance

Past Performance

As an agency, CAPCOG manages numerous federal and state grants, but the two most relevant grants managed by the staff participating in this grant include a state air quality grant that funds O_3 monitoring and a federal grant for commuting-related outreach and education. CAPCOG currently receives a Rider 7 Local Air Quality Planning Grant (Rider 7 Grant) from the TCEQ. While CAPCOG has received a similar TCEQ grant since the early 2000s, the current grant runs from 2020 to 2023. The Rider 7 Grant funds regional O_3 monitoring and emissions inventory projects. The Rider 7 Grant requires the development of a Statement of Work and Quality Assurance Project Plan (QAPP) for each funded activity. CAPCOG has been able to successfully complete and meet the expected outcomes and outputs for the current Rider 7 Grant and similar TCEQ grants in the past. This grant was just over $281,000 for 2020-2021, and it is just over $1 million for 2022-2023. CAPCOG has received this type of air quality funding from the state dating back to 2002, when CAPCOG established its first air monitoring station.

Other parts of CAPCOG's air quality program are funded from contributions from local governments, which totals about $300,000 per year. Additionally, CAPCOG has followed all state grant rules and requirements per Texas' Grant Management Standards (TxGMS) or Texas' Uniform Grant Management Standards (UGMS)[7].

In 2019, CAPCOG managed a $250,000 federal grant Surface Transportation Block Grant (STBG) from the Texas Department of Transportation (TxDOT) for CAPCOG's "Commute Solutions" Program. This involved procurement of a vendor to provide ride-sharing/trip-planning services for regional commuters, procurement of outreach and education services, and conducting a commuter survey. As part of this effort, CAPCOG convened a Regional Transportation Demand Management (TDM) Coordination Committee to share information across the region and enhance performance of TDM programs. CAPCOG followed all federal grant management requirements.

Reporting Requirements

The Rider 7 grant requires quarterly reporting and annual reporting on grant activities, milestones, outputs, outcomes, and expenditures. Additionally, the Rider 7 grant requires technical reports on the outputs and outcomes of the regional O_3 monitoring and emissions inventory projects. CAPCOG always has met the reporting requirement and technical report deadlines on time, and all reports were considered acceptable by the TCEQ. The TxDOT grant required monthly activity reports and billing, which CAPCOG successfully completed.

Staff Expertise

CAPCOG has been involved in voluntary air quality planning for over 20 years. Since the early 2000s, CAPCOG has operated a network of research grade, non-regulatory O_3 and meteorological CAMS. The data from CAPCOG's O_3 CAMS is reported to TCEQ's LEADS system and EPA's AirNow system for use by the public and other organizations for air quality awareness, forecasts, and planning. The CAPCOG Air Quality Program conducts air quality data analyses, prepares reports, convenes the CAC and its advisory committee, coordinates regional air quality O&E, and oversees implementation of the region's voluntary air quality plan. For 5 years, CAPCOG has maintained an air quality O&E platform, Air Central Texas, that the region uses to inform the community of air quality issues and information. Air Central Texas has always been available in English and Spanish.

The CAPCOG project contact and manager for this grant is Mr. Andrew Hoekzema, Regional Planning and Services (RPS) Director. Mr. Hoekzema has worked at CAPCOG for over 10 years in CAPCOG's Air Quality Program. Mr. Hoekzema has overseen the development of regional air quality plans, monitoring projects, emissions inventory projects, NAAQS non-attainment cost analyses, contracts, and past grants. From 2015 – 2021, Mr. Hoekzema served on the EPA Clean Air Act Advisory Committee. Additionally, CAPCOG's Air Quality Program Manager, Mr. Anton Cox, will be involved in the project. Mr. Cox worked in CAPCOG's Air Quality Program from 2016-2020, and he recently re-joined CAPCOG in March 2022. Currently at CAPCOG, Mr. Cox is responsible for contract management for air quality monitoring, air quality data analyses, emissions inventory research, air quality grant management, main CAPCOG staff representative for the CAC, and O&E.

For SEU, Dr. Paul Walter and Mr. Mark Estes will be the faculty working on this project. Dr. Walter holds a Ph.D. in Physics from the University of Texas at Austin, and he has experience in air quality research since 2016. Dr. Walter has managed ozonesonde campaigns for San Antonio and El Paso in 2019 and 2020. He led the ozonesonde portion of the NASA-led TRACER-AQ campaign in September 2021 that incorporated supporting measurements from TCEQ. Mr. Estes holds a Master of Science in Environmental Science from the University of Virginia. Prior to SEU, Mr. Estes worked for the TCEQ as a Senior Air Quality Scientist and in other air quality positions from 1993 to 2019. Mr. Estes performed field campaigns and studies of O_3, carbon monoxide, nitrogen

[7] Texas Comptroller of Public Accounts, Grant Management, https://comptroller.texas.gov/purchasing/grant-management/

oxides, volatile organic compounds, and meteorological data for the TCEQ, including detailed studies of regional background O_3. He performed quality assurance/quality control procedures for ambient monitoring in both the field and the lab, with the TCEQ and with previous jobs.

HT faculty working on this project are Dr. Amanda Masino and Dr. Wenxian Tan. Dr. Masino is Associate Professor of Biology and Chair of Natural Sciences. She also directs the STEM Research Scholars and will be well positioned to recruit, train, and sustain a student researcher pool to maintain the monitors. Dr. Tan is Assistant Professor of Biology. Both Dr. Masino and Dr. Tan are faculty in HT's EJ Program.

Section 7: Budget

Budget Detail

CAPCOG proposes purchasing 7 continuous $PM_{2.5}$ monitors for an operation period of 2 years for this project. The operation and maintenance of the monitors will be performed by a contractor. Additionally, CAPCOG proposes to purchase 20 PurpleAir PM sensors for operation during the project. In addition to CAPCOG staff salaries to manage and perform the grant project expectations, CAPCOG will issue subawards to HT and SEU. The subawards will fund faculty participation in the project, faculty and student training on the operation and maintenance of the monitors, and student research and final reports on the collected data and outcomes from the training. The budget includes travel to drive to the monitoring sites for training and yearly site visits. All funds used will be federal, EPA funds, from this grant award. There is no cost-share proposed. CAPCOG will ensure proper management of the grant funds by following all EPA guidance and the guidance discussed in the "Interim General Budget Development Guidance for Applicants and Recipients of EPA Financial Assistance."[8] All itemized costs presented have been rounded up to the nearest dollar per the application guidance.

Budget Table

Line Item and Itemized Cost	EPA Funding
Personnel	
(1) Project Manager @ $43.27 per hour x 8 hours per month x 36 months	$12,462.00
(2) Project Staff @ $33.65 per hour x 12 hours per month x 36 months	$14,539.00
(3) Administrative Assistant @ $22.00 per hour x 2 hours per month x 36 months	$1,584.00
TOTAL PERSONNEL	$28,585.00
Fringe Benefits	
Fringe Rate of 51.42% of personnel	$14,699.00
TOTAL FRINGE BENEFITS	$14,699.00
Travel	
Mileage: 50 miles per trip x 1 trip per site per year x 7 sites x $0.585 per mile x 3 years	$615.00
TOTAL TRAVEL	$615.00
Equipment	
7 Continuous $PM_{2.5}$ Monitors @ $18,000.00 each	$126,000.00
TOTAL EQUIPMENT	$126,000.00
Supplies	
14 Pumps @ $800.00 each for Yearly Replacement at 7 Sites	$11,200.00
1 $PM_{2.5}$ High-Flow Verification Kit	$3,000.00
20 PurpleAir PA-II @ $249.00 each	$5,000.00

[8] EPA, RAIN-2019-G02, May 28, 2019, https://www.epa.gov/grants/rain-2019-g02

Line Item and Itemized Cost	EPA Funding
TOTAL SUPPLY	$19,200.00
Contractual	
Operation and Maintenance of 7 Continuous $PM_{2.5}$ Monitoring Sites for 2 years @ $15,891.00 per site per year	$190,694.00
Training of SEU and HT on Operation and Maintenance of Continuous $PM_{2.5}$ Monitoring Sites for 3 Days @ $1,255.00 per day	$3,765.00
TOTAL CONTRACTUAL	$194,459.00
Other	
Accounting Charges (direct cost allocation based on agency labor-hours, approximately $0.086 per dollar of salary)	$2,459.00
Personnel Charges (direct cost allocation based on agency labor-hours, approximately $0.060 per dollar of salary)	$1,716.00
Electricity Service @ $20.00 per month at 7 sites for 24 months	$3,360.00
License Upgrade for DR DAS Envidas Ultimate Data Reporting Software	$1,872.00
Subaward Costs to HT and SEU	$56,950.00
TOTAL OTHER	$66,357.00
Indirect	
Predetermined rate of 13.35% of personnel (i.e., personnel costs)	$3,817.00
TOTAL INDIRECT	$3,817.00
TOTAL FUNDING	**$453,732.00**
TOTAL PROJECT COST	**$453,732.00**

Reasonableness of Costs

Personnel:

Three CAPCOG staff members will work on this project. The table below lists the CAPCOG personnel involved in this project.

Full Time Equivalent (FTE) CAPCOG Personnel	Hourly Salary	Total Project Estimated Hours	Percentage of Time on Project	Total
RPS Director (Project Manager)	$43.27	288	36%	$12,462.00
Air Quality Program Manager (Project Staff #1)	$33.65	432	55%	$14,539.00
RPS Administrative Assistant	$22.00	72	9%	$1,584.00
Total FTE Personnel	**n/a**	**792**	**100%**	**$28,585.00**

Fringe Benefits:

CAPCOG's current fringe rate is 51.42% of salaries and wages. CAPCOG's fringe benefits include employee leave, payroll taxes, employee insurance, retirement contributions, merit pay, workman's compensation, and employee wellness programs. The total Fringe Benefits is $14,699.00.

Travel:

The travel proposed includes day trips for the CAPCOG Air Quality Program Manager to drive to each monitoring site once per year of the project period. No per diem is needed as travel will be within the CAPCOG region. However, mileage is included at the current Internal Revenue Service (IRS) business rate of $0.585.[9] It is estimated that each trip will be 50 miles round trip. Travel to all 7 sites would happen for all 3 years of the project period in order to check on the equipment and the site location. The total travel proposed is $615.00.

Equipment:

CAPCOG proposes to purchase 7 MetOne Beta Attenuation Mass (BAM) 1022 Monitors. The estimated cost of the BAM 1022 is $18,000.00 per monitor, so $126,000.00 for 7 monitors. Cost estimates are directly from MetOne. However, a comparable FRM/FEM monitor that is capable of collecting and reporting 1-hour $PM_{2.5}$ concentrations may be used based on equipment availability, cost, and other factors at the time the grant is awarded.

Supplies:

For the 7 monitors, a pump is needed at each site, and the pump will need to be replaced each year for the 2-year period of monitor operation. The pumps are estimated to be $800.00 each, so 7 sites with a yearly pump replacement equals $11,200.00. Additionally, a $PM_{2.5}$ high-flow verification kit is needed for the maintenance of the monitors with an estimated cost of $3,000.00. Only one kit is needed for all 7 sites. The cost estimate for the pumps and verification kit is from CAPCOG's current monitoring contractor. Lastly, CAPCOG proposes to install 20 PurpleAir PA-II sensors at $249.00 each, which is the current price on the PurpleAir website. Therefore, CAPCOG is requesting $5,000.00 for the PurpleAir sensors. The Supplies total is $19,200.00.

Contractual:

CAPCOG will select a contractor to operate and maintain the monitors for 2 years via a competitive RFP process. It is anticipated that the contractor would set-up the 7 monitoring sites, perform regular maintenance, troubleshoot and repair issues that arise, provide monthly reports with data completeness and monthly activities, check data reporting daily, and perform site shutdowns. Maintenance includes monthly and quarterly flow verifications, mass flow filter changes, vacuum pump flow checks, inline pump filter checks, and any other work that arises. Additionally, the contractor would train HT and SEU faculty and students on the operation and maintenance of the monitors. CAPCOG's cost estimates for contractual expenditures are based on responses CAPCOG received to its RFP for Air Monitoring Services conducted in fall 2021 for 2022 monitoring, which included a request for costs for installation and maintenance of $PM_{2.5}$ monitors as an optional task that CAPCOG could subsequently exercise, and from discussions in early 2022 with CAPCOG's current monitoring contractor for fair-market rates.

The total anticipated Contractual cost is $194,459.00.

Other:

Other costs include accounting charges, personnel charges, electricity service at each site, license upgrade for DR DAS' Envidas Ultimate data reporting software, and subawards. Accounting charges are a direct cost allocation based on agency labor-hours that is approximately $0.086 per dollar of CAPCOG salary. Accounting charges are estimated to be $2,459.00. Personnel charges are a direct cost allocation based on agency labor-hours that is approximately $0.060 per dollar of CAPCOG salary. Personnel charges are estimated to be $1,716.00. Each site will need electricity service to operate the monitors. It is estimated that the monthly electricity cost will be $20.00 for 2 years at each of the 7 sites, which totals $3,360.00. The electricity costs are based on the amount that CAPCOG currently pays for electricity at CAPCOG's O_3 monitoring sites. In 2020, CAPCOG purchased a license for DR DAS' Envidas Ultimate, which is a data reporting software that collects the

[9] IRS, Standard Mileage Rates, 2022, https://www.irs.gov/tax-professionals/standard-mileage-rates

monitoring data from CAPCOG's CAMS and transmits the data via file transfer protocol (FTP) to EPA's AirNow and TCEQ's LEADS. CAPCOG will have to purchase a license upgrade to the software to add $PM_{2.5}$ monitoring sites and continuous data collection and transmission. In January 2022, DR DAS provided CAPCOG with an estimate of $1,872.00 for such a license upgrade.

CAPCOG will issue subawards to HT and SEU. Each university will have 2 faculty members throughout the project period and 1 student for summer 2024. The subawards will fund faculty time to participate throughout the grant period as a project partner in addition to training the faculty on the maintenance and operation of the monitors. The subawards will fund 1 student from each university to work on the project in summer 2024 to learn the operation and maintenance of the monitors and to assist in data analyses of the collected data throughout the project period. The subaward amounts include travel for university faculty and students to visit the sites to receive training on the maintenance and operation of the monitors. CAPCOG proposes to subaward $22,361.00 to HT and $34,589.00 to SEU for the project period. The subaward amounts were developed in consultation with SEU and HT faculty and the Offices of Sponsored Programs to ensure accuracy of the cost estimates. The total subaward amount equals $56,950.00.

The total "Other" budget is $66,357.00

Indirect:

CAPCOG's indirect rate is 13.35% of CAPCOG salaries. Therefore, the proposed Indirect budget is $3,817.00.

Expenditure of Awarded Funds

Upon CAPCOG's award of this grant, CAPCOG will initiate 4 different processes in order to achieve the goal of starting monitoring by July 1, 2023: 1) procure equipment, 2) procure a monitoring contractor, 3) execute subaward agreements with SEU and HT, and 4) begin the site selection process. CAPCOG has considerable experience with each of these activities and will keep EPA informed of the progress or any issues that may arise that could cause a delay in starting monitoring. CAPCOG will require monthly billing from the monitoring contractor and subaward recipients in order to ensure expeditious expenditure of grant funds. CAPCOG will track expenditures monthly, in addition to the quarterly tracking required for this contract. CAPCOG will track the expenditure of the grant funds to ensure that the personnel, subaward and other, fringe, and indirect costs are expended in line with the project's milestones.

Attachments

Attachments include:

1. Quality Assurance Statement
2. Partnership Letters
3. Resolutions and Letters of Support
4. Resumes of the Project Manager and Other Key Personnel

ANDREW HOEKZEMA

Ex. 6 Personal Privacy (PP)

Ex. 6 Personal Privacy (PP)

PROFESSIONAL EXPERIENCE:

Capital Area Council of Governments (CAPCOG), Austin, TX, 2010 – Present

- Positions:
  - Director of Regional Planning and Services: 2019 – Present
  - Assistant Director of Regional Planning and Services: 2018 – 2019
  - Director of Regional Services: 2016 – 2018
  - Air Quality Program Manager: 2013 – 2016
  - Air Quality Program Specialist: 2010 – 2013
- Supervises regional air quality, solid waste, transportation, Geographic Information Services (GIS), economic development, and criminal justice planning in close coordination with local governments in the 10-county CAPCOG region.
- Serves as agency's primary point of contact for demographic data and regional planning.
- Conducts planning and technical research, tracks regulatory developments, develops and plans programs, coordinates policy advisory committees, conducts outreach, manages grants and contracts, and supervises employees.

Texas Commission on Environmental Quality (TCEQ), Austin, TX: 2009 – 2010

- State Implementation Plan (SIP) Project Manager for Air Quality Division
- Served as air quality planning liaison for the Dallas-Fort Worth (DFW) and Austin areas

Research Management Strategies, LLC, New Brunswick, NJ: 2005 – 2007

- Political consultant for local political campaigns
- Data analysis, campaign strategy, campaign field operations, campaign communications

EDUCATION:

- **Master of Public Affairs, the University of Texas at Austin, May 2009**
- **Bachelor of Arts, Rutgers, the State University of New Jersey, May 2005**
- **GIS Certificate, Austin Community College, Anticipated August 2022**

OTHER ACTIVITIES AND ACCOMPLISHMENTS:

- U.S. Environmental Protection Agency's Clean Air Act Advisory Committee: 2015 – 2021
- LBJ School Austin Alumni Association:
  - Board Member and Treasurer 2014 – 2016
  - Board Member 2017 – 2018
- Reed Elementary School (Leander ISD):
  - Parent-Teacher Association Financial Reconciliation Committee: 2016
  - Parent-Teacher Association Nominations Committee: 2017
  - Site-Based Planning Committee: 2017 – 2018
- University United Methodist Church Finance Committee, 2012 – 2014

ANDREW HOEKZEMA

Ex. 6 Personal Privacy (PP)

Ex. 6 Personal Privacy (PP)

Selected Air Quality Technical and Planning Projects

- **Air Monitoring Projects**:
  - Management of CAPCOG ozone monitoring network, 2011 – present (6-8 sites)
  - Management of contract with St. Edward's University for ozone sonde data collection, 2016 and 2017
  - Management of contract with University of Texas for mobile monitoring and volatile organic compound canister sampling, 2011-2012
- **Emissions Inventory Projects**:
  - Managed contracts for development of county-wide link-based on-road emissions inventories; heavy-duty vehicle idling; selected fleet emissions inventories
  - Developed and managed contracts for updated non-road agricultural, construction and mining, industrial, and lawn and garden equipment
  - Developed emissions inventories for non-point industrial and commercial fuel combustion, selected oil and gas equipment, and graphic arts facilities
  - Refinement temporal distribution of selected point source emissions inventories
  - Updated spatial allocation factors for on-road, non-road, and non-point emissions
- **Air Quality Modeling and Data Analysis**:
  - Development of ozone conceptual models for the Austin area, 2011 and 2016, annual air quality analyses, 2017, 2018, 2019, 2020, and 2021
  - Managed contracts for base case, sensitivity, control strategy, and source apportionment modeling in 2012 and 2017
- **Air Quality Plans**:
  - 2021 $PM_{2.5}$ Addendum to the 2019-2023 Voluntary Regional Air Quality Plan
  - 2019-2023 Voluntary Regional Air Quality Plan for the Austin Area
  - 2013-2018 Ozone Advance Program Action Plan for the Austin Area
- **Other Notable Projects**:
  - Co-Author of EPA Clean Air Act Advisory Committee's 50th Anniversary of the Clean Air Act Report, 2021
  - Analysis of Potential Costs of an Ozone Nonattainment Designation for the Oklahoma City Area, 2021 (for the Association of Central Oklahoma Governments)
  - Air Quality Impact of Telecommuting during COVID 19, 2021 (for the City of Austin)
  - Analysis of Air Quality Impacts of MoPac Express/Managed Lanes (for the Central Texas Regional Mobility Authority), 2019
  - Quantification of Emission Reduction Benefits of Voluntarily Implemented Control Strategies, 2018
  - Analysis of Potential Costs of an Ozone Nonattainment Designation for the Austin Area, 2015 (winner of 2016 innovation award from the National Association of Development Organizations)
  - Program Evaluation of the Emissions Inspection and Maintenance Program, 2015
  - Air Quality Impact Analysis of Major Events at the Circuit of the Americas, 2014
- **Conferences**:
  - Presenter and session moderator at Texas Transportation Institute's 2019 Transportation, Air Quality and Health Symposium
  - Panelist at 2016 Clean Air Through Energy Efficiency Conference
  - Presenter at EPA's 2015 International Emissions Inventory Conference

Anton C. Cox

Resume

Ex. 6 Personal Privacy (PP)

Summary

I am passionate about finding sustainable solutions that will help meet goals while also tackling real-world realities like economics and equity. I first found my voice in sustainability when I started to learn about a coke-fired power plant that was being constructed in the Corpus Christi area while I was a student there. I wanted to better understand the multifaceted issues that came with building such a facility from not only an environmentally concerned advocate's standpoint but also a scientific and policy/regulatory standpoint. I have since earned a degree in Environmental Science, completed coursework in a Sustainability Master's program, and worked in multiple professional positions to provide me a well-rounded perspective on how to assess, plan, and implement solutions to reach large-scale goals.

Experience

Capital Area Council of Governments / Air Quality Program Manager

Mar. 2022 - current

Austin, TX

Manage the organization's regional air quality program which includes:

- Manages vendor contracts for ambient air quality monitoring, outreach, emissions inventory projects, and other projects needed to support the program.
- Performs technical, research, planning, policy, program assessment, and administrative activities related to program assignment.
- Manages air quality grants from TCEQ and local funding that supports the air quality program.
- Serves as primary staff point of contact for CAPCOG's Clean Air Coalition (CAC) and Clean Air Coalition Advisory Committee (CACAC).
- Conducts outreach to increase visibility and awareness of programs to community and professional groups.

Movability / Program Manager

Jan. 2020 - Mar. 2022

Austin, TX

As the Program Manager at Movability, I served as a primary point of contact and a liaison between Movability, the business community, member companies, and other stakeholders.

I was responsible for providing customized mobility planning for employers, strategic planning on upcoming initiatives, and implementation for key Movability programming.

Programs that I managed included:

- Mayor's Mobility Challenge - employer commuter mobility planning
- GoGrant - small business grants to fund TDM strategies
- Events, Training & Workshops - including a Behavior Change through Motivational Interviewing workshop, and the Mobility Summit
- MovePass - transit pass distribution program
- Get There - a ride-matching incentive program

Capital Area Council of Governments / Regional Outreach Specialist
Mar. 2016 - Jan. 2020
Austin, TX

Manage the regional Air Quality Outreach program - Air Central Texas, and the regional Transportation Demand Management program - Commute Solutions which included,

- generating content for outreach,
- managing social media accounts,
- outreach to the public, employers, and elected officials,
- implementing paid marketing,
- maintaining websites,
- meeting, and collaboration with regional stakeholders, and
- tracking performance towards program goals.

Texas Commission on Environmental Quality / Air Quality Permit Specialist
Jun. 2014 - Mar. 2016
Austin, TX

As part of the Air Permits Division – Chemical Section I reviewed state and federal permit applications from chemical plants and refineries. I check emissions calculations, reviewed health impacts, reviewed control technologies, wrote technical reviews, and responded to public comments.

This position requires detailed knowledge about federal and state environmental rules, strong math and chemistry skills, technical writing skills, and strong communication skills.

Time and project management skills were also required since applications were managed by the permit writers from start to finish which can take anywhere from 45 days to over a year and delays during permitting could halt construction of new facilities in the state.

Education, Accolades, and, Additional Work

Texas State University-San Marcos
Course work in the Interdisciplinary Master of Science in Sustainability Studies
2012 - 2014
San Marcos, TX

Texas A&M University-Corpus Christi
Bachelor in Environmental Science – Policy and Regulation (minor in Chemistry)
2008 - 2012
Corpus Christi, TX

40 under 40 Recipient from the Association for Commuter Transportation - an award from an international association and advocate for commuter transportation and transportation demand management.
2021

PAUL J. WALTER
Associate Professor of Physics
St. Edward's University, Austin, TX
Ex. 6 Personal Privacy (PP)

A. Professional Preparation

University of Notre Dame	Physics	B.S., 2001
University of Texas at Austin	Physics	Ph.D., 2009

B. Appointments

2019-present Associate Professor of Physics, St. Edward's University (SEU)
2017-2019 Assistant Professor of Physics, St. Edward's University
2014-2017 Visiting Assistant Professor of Science, St. Edward's University
2010-2014 Assistant Professor of Science (non-tenure track), St. Edward's University

C. Publications

(i) Most closely related publication

1. Yoon, S., Kotsakis, A., Alvarez, S. L., Spychala, M. G., Klovenski, E., Walter, P., Morris, G., Corrales, E., Alan, A., Diaz, J. A., and Flynn, J. H.: Development and Testing of a Novel Sulfur Dioxide Sonde, Atmos. Meas. Tech. Discuss. [preprint], https://doi.org/10.5194/amt-2022-66, in review, 2022.

(ii) Other publications

1. P. J. Walter and T. I. Smith, "Comparing pre/post item response curves to identify changes in misconceptions," 2021 PERC Proceedings [Virtual Conference, August 4-5, 2021], edited by M.~B.~Bennett, B.~W.~Frank, and R.~E.~Vieyra, https://doi.org/10.1119/perc.2021.pr.Walter

2. Richardson, Connor J., Trevor I. Smith, and Paul J. Walter. "Replicating analyses of item response curves using data from the Force and Motion Conceptual Evaluation," *Physical Review Physics Education Research*, **17**, 020127 (2021). https://doi.org/10.1103/PhysRevPhysEducRes.17.020127

3. Walter, Paul J., Edward Nuhfer, and Crisel Suarez. "Probing for Bias: Comparing Populations Using Item Response Curves," *Numeracy*, **14** (1), Article 2 (2021). https://doi.org/10.5038/1936-4660.14.1.1357

4. Watson, Rachel M., Edward Nuhfer, Kali Nicholas Moon, Steven Fleisher, Paul Walter, Karl Wirth, Christopher Cogan, Ami Wangeline, and Eric Gaze. "Paired Measures of Competence and Confidence Illuminate Impacts of Privilege on College Students," *Numeracy*, **12** (2), Article 2 (2019). https://doi.org/10.5038/1936-4660.12.2.2

5. G. A. Morris, P. J. Walter, S. Skees, and S. Schwartz, "Transition Matrices: A Tool to Assess Student Learning and Improve Instruction," *The Physics Teacher*, **55** (3), 166-169 (2017). http://dx.doi.org/10.1119/1.4976661

D. Synergistic Activities:

1. As part of outreach efforts for the NASA-led TRACER-AQ campaign, I answered questions during a session with Kohala Middle School (Big Island, Hawaii) students on September 16, 2021.

2. Invited speaker for a session on Engaging and Teaching Students at Hispanic Serving Institutions (HSIs): Walter, P., A. Holgado, R. Burks, C. Hauser, B. Shebaro, "Preparing Students for the Fourth Industrial Revolution at an HSI," American Association of Physics Teachers (AAPT) 2019 Summer Meeting, Provo, UT, July 23, 2019.

3. Helped with an SO_2 sonde launch from Naalehu Elementary School as part of the NASA-funded "Big Island SO_2 Survey" (James Flynn, PI) during the then ongoing Kilauea eruption in June 2018.

4. Served as a judge from 2017 – 2019 of students' project proposals for Higher Orbits *Go For Launch!* events hosted at St. Edward's University.

5. Helped run an Ozonesonde Workshop at the University of Texas at El Paso where 30+ students and faculty from 5 institutions were trained on how to condition and launch ozonesondes in May 2017. It was part of the 2017 El Paso Ozone Transport Field Study funded by the El Paso Metropolitan Planning Organization (Dave Dubois, NMSU, PI) where SEU had a subaward.

Curriculum vitae

Mark J. Estes

Adjunct Professor

Ex. 6 Personal Privacy (PP)

Education

M.S. Environmental Sciences, University of Virginia, 1990

B.S. Physics, with high honors, University Scholar, Auburn University, 1985

Minors in chemistry, mathematics, English, German

Professional Appointments

Adjunct Professor, St. Edward's University, January 2020-present

Senior Air Quality Scientist, Texas Commission on Environmental Quality, April 2004-September 2019

Environmental Specialist, Texas Natural Resource Conservation Commission/Texas Commission on Environmental Quality, May 1994-April 2004

Modeling and Assessment Specialist, Texas Air Quality Control Board/Texas Natural Resource Conservation Commission, July 1993-May 1994

Air Quality Scientist, Radian Corporation, September 1991—April 1993

Awards and Honors

Certified Consulting Meteorologist, no. 739, American Meteorological Society,

23 January 2018

Professional Activities

Member of the Independent Technical Advisory Committee, University of Texas Air Quality Research Program, 2010-2019

NASA Health and Air Quality Applied Sciences Team, 2016-2019

San Antonio Field Study Science Team, 2017-present

NASA DISCOVER-AQ Science Team (Houston 2013 deployment)

NASA Air Quality Applied Sciences Team, 2013-2016

Reviewer for the *Journal of Geophysical Research: Atmospheres, Atmospheric Environment, Atmospheric Chemistry and Physics, Journal of the Air and Waste Management Association*, 2007-present

Recent peer-reviewed journal publications

Li, W., Wang, Y., Bernier, C., & Estes, M. (2020). Identification of sea breeze recirculation and its effects on ozone in Houston, TX, during DISCOVER-AQ 2013. *Journal of Geophysical Research: Atmospheres*, 125, e2020JD033165. https://doi.org/10.1029/2020JD033165

Bernier, C., Wang, Y., Estes, M., Lei, R., Jia, B., Wang, S. C., & Sun, J. (2019). Clustering surface ozone diurnal cycles to understand the impact of circulation patterns in Houston, TX. *Journal of Geophysical Research: Atmospheres*, 124, 13,457–13,474. https://doi.org/10.1029/2019JD031725

Lei, Ruixue, Robert Talbot, Yuxuan Wang, Sing-Chun Wang, Mark Estes (2019), Surface MDA8 ozone variability during cold front events over the contiguous United States during 2003-2017, *Atmos. Environ.*, 213: 359-366, https://doi.org/10.1016/j.atmosenv.2019.06.003

Tzompa-Sosa, Z.A., B.H. Henderson, C.A. Keller, K. Travis, E. Mahieu, B. Franco, M. Estes, D. Helmig, ... E.V. Fischer (2018), Atmospheric implications of large C2-C5 alkane emissions from the U.S. oil and gas industry, *Journal of Geophysical Research: Atmospheres*, https://doi.org/10.1029/2018JD028955

Wang, Sing-Chun, Yuxuan Wang, Mark Estes, Ruixue Lei, Robert Talbot, Liye Zhu, Pei Hou (2018), Transport of Central American fire emissions to the U.S. Gulf Coast: Climatological pathways and impacts on ozone and PM2.5, *J. Geophys. Res.*, 123(15): 8344-8361, https://doi.org/10.1012/2018JD028684

Wang, Yuxuan, Beixi Jia, Sing-Chun Wang, Mark Estes, Lu Shen, and Yuyuan Xie, (2016), Influence of the Bermuda High on interannual variability of summertime ozone in the Houston-Galveston-Brazoria region, *Atmospheric Chemistry and Physics*, 16: 15,265-15,276, https://doi.org/10.5194/acp-16-15265-2016

Mazzuca, Gina M., Xinrong Ren, Christopher P. Loughner, Mark Estes, James H. Crawford, Kenneth E. Pickering, Andrew J. Weinheimer, and Russell R. Dickerson, (2016), Ozone production and its sensitivity to NOx and VOCs: Results from the DISCOVER-AQ field experiment, Houston 2013, *Atmos. Chem. Phys.*, 16: 14463-14474, https://doi.org/10.5194/acp-16-14463-2016

Amanda M. Masino, Ph.D.

Curriculum Vitae (recent and condensed)

Education

Ph.D., Genetics and Developmental Biology, University of Texas Southwestern Medical Center, Dallas, Texas. 2005. Dissertation title: Transcriptional profiling of early cardiac development.

B.S., Zoology, Texas A&M University, College Station, Texas. 1998.

Professional History

2019-	Chair of Natural Sciences, Huston-Tillotson University, Austin, Texas.
2017-	Director, Environmental Justice Program, Huston-Tillotson University, Austin, Texas.
2017-	Faculty Director, St. David's Foundation Scholars Program, Huston-Tillotson University, Austin, Texas.
2015-	Director, STEM Research Scholars Program, Huston-Tillotson University, Austin, Texas.
2015-	Associate Professor of Biology, Huston-Tillotson University, Austin, Texas. (Tenured 2018)
2011 -2015	Assistant Professor of Biology, Huston-Tillotson University, Austin, Texas. As a faculty member, developed or co-developed nine new courses, significantly revised five, and created over 100 original labs, cases, inquiry activities, or exercises.

- As ***Chair of Natural Sciences***, managed full-time and adjunct faculty, course scheduling, departmental operations, purchases, lab and facilities management, student graduation requests, plagiarism reports, student grade appeals, and other administrative matters. Enacted an overhaul of the chemical waste policy, re-established a Departmental seminar series, and led faculty through a degree plan review.
- As ***Director of the Environmental Justice Program***, led curriculum development, course development, course and degree plan approval, formulation of the new major, assessment, and formulation of and engagement with an external advisory council. Also collaborated on recruitment and scholarship fundraising efforts to grow the major.
- ***Faculty Director of the St. David's Foundation Scholars Program***, which supports high-need, high-achieving HT freshmen who intend to enter the health care work force with a four year $7,500 annual scholarship from the St. David's Foundation. Responsible for student outreach, selection, mentoring, and implementation of career enrichment activities such as seminars, research projects, and service learning focused on health care career paths.
- ***Director of the STEM Research Scholars Program***, a training initiative that provides mentored undergraduate student research opportunities at HT and with collaborating institutions. Responsible for grant writing, grant management, recruiting and screening students, training students, building collaborations, managing program growth, conducting research, evaluation, mentor training, and managing travel and career development opportunities. Since 2014, this program has created 130+ student research experiences. Supported by the Office of Naval Research, the National Science Foundation, the Department of the Army, Texas Parks and Wildlife Department, Merck, and the Department of Education.

Selected and Recent Funded Grants

Principal Investigator, "Community Engaged Research at Huston-Tillotson University," Hogg Foundation, St. David's Foundation, Google Fiber, and MEASURE. $55,000.

Co-Principal Investigator, "FAST: Full Airframe Sensing Technology for Hypersonic Aerodynamics Measurements." National Aeronautics and Space Administration/Air Force Office of Scientific Research. 2021-2024. $219,000.

Co-Principal Investigator, "Environmental Justice Initiatives." Apple. 2020-2022. $350,000.

Faculty Director, "Healthy Futures Grant." St. David's Foundation, 2020-2024. $389,000.

Co-Principal Investigator, "Interfaith Approaches to Environmental Justice." Arthur Vining Davis Foundation. 2019-2021. $100,000.

Principal Investigator, "Community Engaged Research at Huston-Tillotson University." Good Measure, 2019-2020. $50,000.

Co-Principal Investigator, "Urban Coyotes as Urban Sentinels." Texas Parks and Wildlife Department, 2018-2021. $221,000.

Principal Investigator, "HT-ASSERT Supplement for Faculty Research." National Science Foundation, 2017-2019. $90,000.

Recent Professional Experience and Training (last three years)

2021-	Urban Wildlife Outreach Advisory Board Member, Texas Parks and Wildlife Department.
2021-	Co-Organizer and Fellow, Social Justice Informatics Faculty Fellows Program.
2021	Aligning Strategic Priorities with Financial Resources in Higher Education course, Harvard Graduate School of Education.
2020-	Founding Board Member, Community Resilience Trust, Austin, TX.
2019-	Board Member, Center for Maximum Potential Building Systems, Austin TX.
2018-	University of Texas Department of Civil, Architectural, and Environmental Engineering Community Advisory Board member.
2018-	Urban Land Institute, Affordability Strategic Council member.

Honors and Awards

2019	American Association for the Advancement of Science and Lyda Hill Philanthropies IF/THEN Science Ambassador.
2018	Awarded tenure status at Huston-Tillotson University.
2018	University of Texas "Good Neighbor" Tower Award for Community Service.
2018	IDEAL Faculty Award, Office of the President, Huston-Tillotson University.

Publications and Presentations

Masino, A. "Online Instruction for Natural Sciences Labs and Community-Engaged Research," Faculty Resource Network Teach Share Convening, online, Jan 2021.

Masino, A. "Green is the New Black: Advancing Environmental and Climate Justice in the Classroom and on Campus," UT Hemispheres Summer Institute, online, June 2020.

Masino, A, E.R. Moravec, M. Styles, and R. Taylor. "Community-Engaged Research in Action," Public Interest Technology University Network (PIT-UN) Conference on Undergraduate Informatics Education, Austin, TX, Mar 2020.

Masino, A., W. Tan, and K. Simon, "Closing the Diversity Gap in Wildlife Careers," Texas Chapter of the Wilderness Society Conference, Corpus Christs, TX, Feb 2020.

Masino, A. and L. Vanstone. "Who Can Afford Austin's Affordable Housing? A Survey of Affordable Unit Residents in the 78702 Zip Code." University of Texas at Austin Division of Diversity and Community Engagement research report, January 2018, 1-12.

Masino, A. and K. Schwab. "Inquiry Labs for a Sustainable Low-Cost Biology Program." Tested Studies for Laboratory Studies, 2016 June; 38, Article 41.

Masino, A.M. "A PCR-Based Hunt for Bean Beetle Genes: An Inquiry-Based Lab in Molecular Genetics." Bean Beetle Curriculum Development Network, 2014, *Bean Beetle Curriculum Development Network*.

Wenxian Tan

Ex. 6 Personal Privacy (PP)

EDUCATION:

- **Doctor of Philosophy**, Marine Science, 2013, The University of Texas at Austin
- **Bachelor of Science – Cum Laude**, Biochemistry/Molecular Biology, 2007, Marquette University

RESEARCH FOCUS:

- Urban wildlife biology

RESEARCH EXPERIENCE:

- **Principal Investigator, Huston-Tillotson University, Jan 2018 – May 2021**
  - Studied urban coyotes and their prey items
- **Research Associate, The University of Texas Marine Science Institute, Peter Thomas Ph.D., Jan 2014 – Apr 2014**
  - Studies in elucidating progestin-induced cAMP and Ca^{2+} responses in fish sperm
- **Graduate Research Assistant, University of Texas Marine Science Institute, Peter Thomas Ph.D., 2008-2013**
  - Studies in elucidating nongenomic progestin-induced responses in sperm physiology; second messenger systems (e.g. cAMP, Akt, Erk1/2)
  - Improving milt quality in two marine fishes (i.e. southern flounder and Atlantic croaker)
  - Studies in fish reproductive physiology in response to extreme environments (e.g. hypoxia and low pH)

PUBLICATIONS:

- Tan W, Pang Y, Tubbs C, Thomas P. 2019. Induction of sperm hypermotility through membrane progestin receptor alpha (mPRα): A teleost model of rapid, multifaceted, nongenomic progestin signaling. *Gen. Comp. Endocrinol.* 279: 60-66
- Thomas P, Rahman MS, Picha ME, Tan W. 2015 Impaired gamete production and viability in Atlantic croaker collected throughout the 20,000 km^2 hypoxic region in the northern Gulf of Mexico. Mar. Pollut. Bull. 101 (1): 182-192
- Tan W and Thomas P. 2015. Involvement of epidermal growth factor receptors and mitogen-activated protein kinase in progestin-induction of sperm hypermotility in Atlantic croaker through membrane progestin receptor-alpha. Mol. Cell Endocrinol. 414: 194 - 201

- Tan W and Thomas P. 2014. Activation of the Pi3k/Akt pathway and modulation of phosphodiesterase activity via membrane progestin receptor-alpha (mPRalpha) regulate progestin-initiated sperm hypermotility in Atlantic croaker. *Biol. Reprod.* 90 (5): 105
- Tan, W, Aizen J, Thomas P. 2014. Membrane progestin receptor-alpha mediates progestin-induced sperm hypermotility and increased fertilization success in southern flounder (*Paralichthys lethostigma*). *Gen. Comp. Endocrinol.* 200: 18-26
- Tubbs C, Tan W, Shi B and Thomas P. 2011. Identification of 17,20β,21-trihydroxy-4-pregnen-3-one (20β-S) receptor binding and membrane progestin receptor alpha on southern flounder sperm (*Paralichthys lethostigma*) and their likely role in 20β-S stimulation of sperm hypermotility. *Gen. Comp. Endocrinol.* 170: 629-639

AWARDS:

- Best Professor 2022, Huston-Tilloston University

TEACHING EXPERIENCE:

- Assistant Professor, Huston-Tillotson University, 2018 - Present
- Adjunct Professor, Huston-Tillotson University, 2014 – 2018
- Adjunct Professor, Austin Community College, 2016 – Present
- Adjunct Instructor, Art Institute of Austin, 2017
- Guest Lecturer, Flour Bluff ISD Middle School, 2012-2013
- Guest Lecturer, Portland ISD High School, 2012
- Teaching Assistant, University of Texas at Austin, 2007-2008

STUDENTS MENTORED:

- Nana-Ama Anang, The University of Texas at Austin, TX (Semester by the Sea), 2014
- Jennifer Strykowski, Univeristy of South Florida, FL (Research Experience for Undergraduates), 2008

RECENT MEETINGS AND PRESENTIONS:

- Texas Chapter of the Wildlife Society 2020, Corpus Christi, TX, 2020
- Texas Bays and Estuaries Meeting 2013, Port Aransas, TX, 2013
- World Aquaculture Society Meeting 2013, Nashville, TN, 2013
- 45th Annual Meeting of the Society for the Study of Reproduction, Penn State, PA, 2012
- 44th Annual Meeting of the Society for the Study of Reproduction, Portland, OR, 2011
- Graduate Student Research Symposium, UTMSI, Port Aransas, TX, 2011